MODERN PACKAGING

July 1946

LIBRARY
JUL 31 1946
DETROIT

HOW *Flexible* . . .

SHOULD THE RIGHT ADHESIVE BE?

RELY on National . . . with its interest in your individual requirements . . . for an adhesive that will be flexible enough to meet all plant and field variations.

Let's look at some individual requirements. A hard luggage adhesive should be easily handled and versatile. It should adhere vulcanized fiber to plywood . . . 'draw on' leather to wood, fabric, paperboard, etc., . . . bond wood molding inside sample cases . . . laminate multiple plies of veneer before shaping under heat and pressure . . . and offer exceptional resistance to weather and fungus. A soft luggage adhesive should leave bonded leathers and treated fabrics with an outstanding softness and pliability.

An upholstering adhesive should provide adequate tack and speed for hand adhering cloth to cloth, chipboard, wood, wadding, etc. It should be free from residual odor and any tendency to penetrate and stain light fabrics.

A labeling and overcoating adhesive should bond to wood, fiber, painted steel, tin and glass. It should be weather-proof, vermin-proof, age-proof.

It doesn't matter whether your adhesive problem is a run-of-the-mill packaging, converting, assembling job or a brand new postwar problem. National is interested in creating an adhesive formula that will meet your individual requirements . . . provide sufficient flexibility for material and commercial variations . . . withstand all extremes of shipping and consumer uses. Your inquiry is invited — NOW!

• Offices: 270 Madison Avenue, New York 16; 3641 So. Washtenaw Avenue, Chicago 32; 735 Battery Street, San Francisco 11, and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto. In England: National Adhesives, Ltd., Slough.

Dunellen Plant

National ADHESIVES

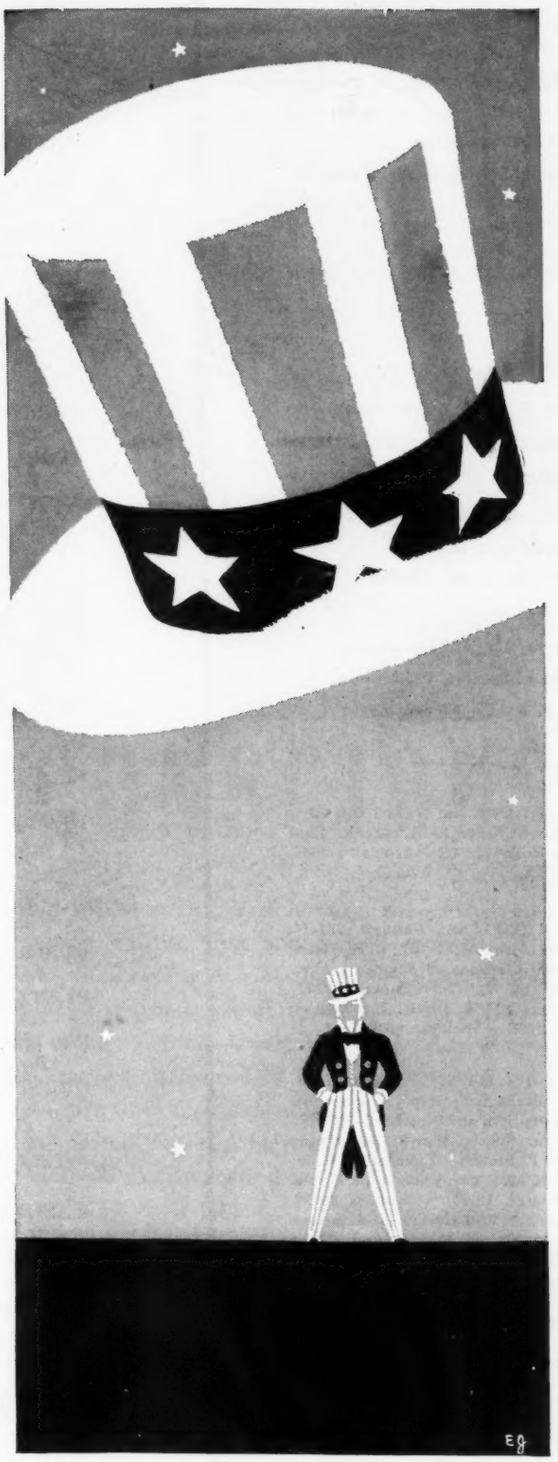
EVERY TYPE OF ADHESIVE FOR EVERY INDUSTRIAL USE

DEPENDABLE

A DEPENDABLE CAP is dependable always —and in all ways. It is a closure in which a packer can safely put his trust, and under which he can confidently pack his product. A dependable cap helps deliver the goods —exact quantity and original quality intact. It is a protector of the product and its good name, a factor in the sale of today, and an aid in that of tomorrow. For a quarter of a century the Phoenix C T Cap has successfully sealed a variety of glass-packaged products: foods, drugs, cosmetics, wines, liquors, household chemicals, and many more. It has been tried by time, tested by use, and proved dependable by both.

Top wear for glassware

PHOENIX METAL CAP CO.
Chicago 8 and Brooklyn 18



CHARLES A. BRESKIN, *Publisher*
CHRISTOPHER W. BROWNE, *Editor-in-chief*
LLOYD STOUFFER, *Editor*
PEARL HAGENS, *Managing Editor*
JULIA J. HICKS, *Associate Editor*
CHARLES A. SOUTHWICK, JR., *Technical Editor*
DONALD R. RUTHER, *Art Director*
H. A LEVEY, *Patents*
FLORENCE GETTER, *Readers' Service*
CHICAGO
VAL WRIGHT, *Midwest Editor*
LOS ANGELES
GEORGE DRAKE, *Pacific Coast Editor*

BUSINESS STAFF

ALAN S. COLE, *General Manager*
P. H. BACKSTROM M. A. OLSEN
J. A. DRUCKER B. W. GUSSOW
Chicago: J. M. CONNORS
Cleveland: R. C. BEGGS
Los Angeles: L. B. CHAPPELL

DANIEL M. BROADS, *Production*
FRANCES MARLENS, *Production*
JAMES F. WELLS, *Circulation*

EXECUTIVE and EDITORIAL OFFICES: Chanin Bldg., 122 E. 42nd St., New York 17; Tel.—Ashland 4-0655.

BRANCH OFFICES: *Chicago:* 221 N. LaSalle St., Chicago 1, Ill.; Tel.—Randolph 5588. *Cleveland:* 815 Superior Ave., Cleveland 14, O.; Tel.—Superior 0737. *Los Angeles:* 427 W. 5th St., Los Angeles 13, Calif.; Tel.—Michigan 9849.

Published the 5th of each month by Modern Packaging Corp. Publication office: Twentieth and Northampton Sts., Easton, Pa. Subscription $5.00 per year in United States; Canadian, $5.50; foreign, $6.00. Two-year subscription: United States, $8.00; Canadian, $9.00; foreign, $10.00. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange by money order or by draft on a New York bank. Price this issue, 50¢ per copy. Copyright 1946 by Modern Packaging Corp. All rights reserved including the right to reproduce this book or portion thereof in any form Printed in U. S. A. Acceptance under the Act of June 5, 1934, at Easton, Pa Authorized October 7, 1936.

MODERN PACKAGING is regularly indexed in the *Industrial Arts Index.*

Member of Audit Bureau of Circulations

MODERN PACKAGING

VOLUME 19 JULY 1946 NUMBER 11

★ ★ ★

General

THE ROLE OF THE DESIGNER 89
His place and function in package development
THE MILK CONTAINER 95
Paper and glass—an analysis of their competitive situation
PRODUCE PRE-PACKAGING 98
Cornell survey of practices in New York and New England
HOUSEWIVES PREFER PRE-PACKAGING, 9 to 1 104
Ohio State checks up on the Columbus produce experiment
HELP! 105
Dow display pieces aid clerk at the point of sale
BIN SIZE 106
These packages use every inch of jobber's shelf space
PACKAGE EVALUATOR 109
Easy, graphic analysis of four basic qualities
SIMPLIFIED BOXES AND TRAYS 112
Economical to manufacture and easy to use
FROZEN PACKS FOR SERUMS 115
Lederle's method for shipping by air
FLYING MACHINES 116
Air delivery breaks equipment bottlenecks
DESIGN HISTORIES 118
ACETATE ADHESION 120
Special materials and techniques for non-heat sealing film
HITCHED TO A STARLET 122
Margaret O'Brien pigtails on new cosmetic packages
PACKAGING PAGEANT 124
NO SHELF APPEAL NEEDED 128
But modern label design helps sell institutional foods
FLIP LID 131
Molded plastic containers for pencil refill leads
DISPLAY GALLERY 132

Technical

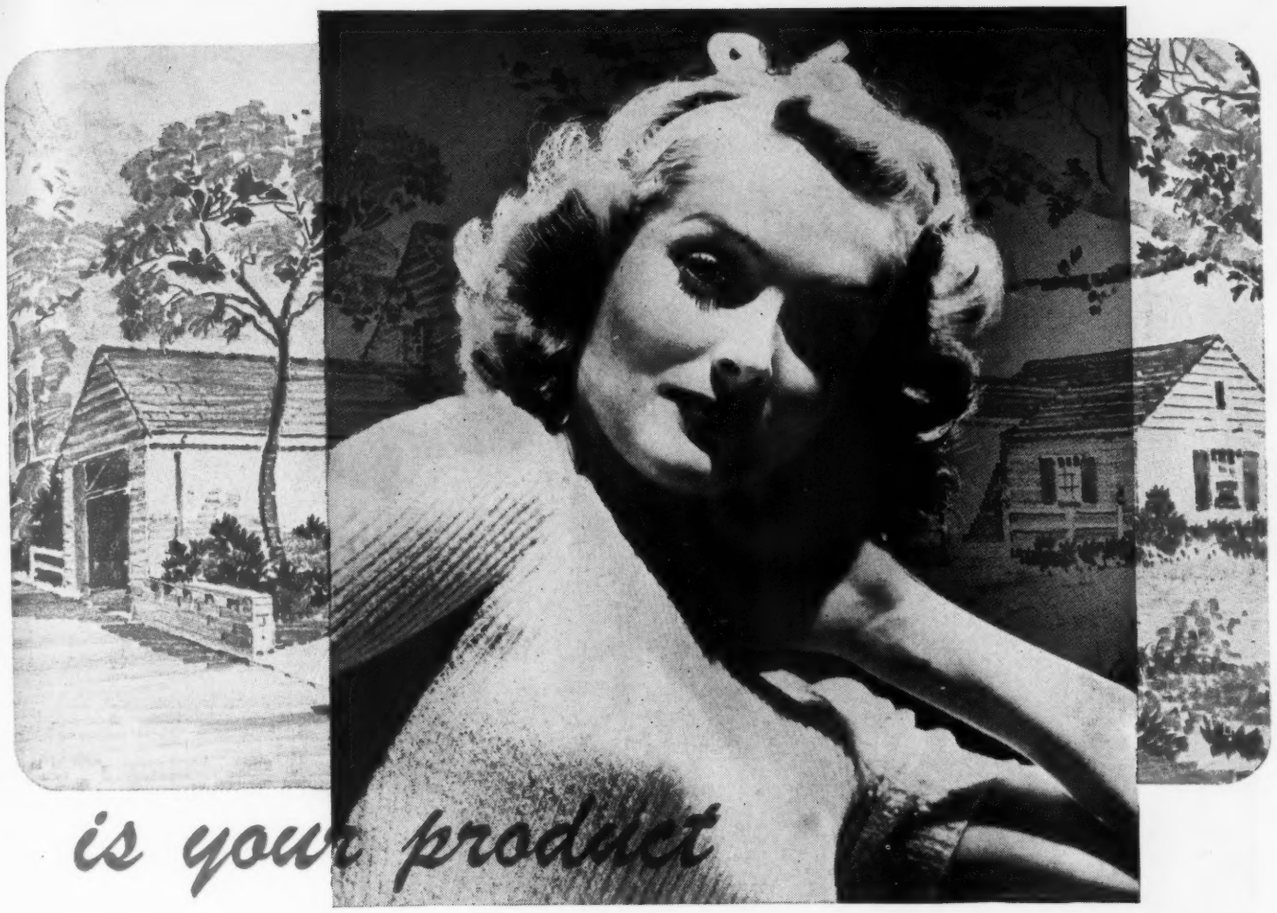
FOR BETTER USAGE 137
3. Terminology of water-vapor transmission testing
PI STANDARD TEST METHODS 140
1. For water-vapor transmission at zero
FOOD PACKAGING STUDIES 143
2. Water-vapor protection by certain non-metal packages
QUESTIONS AND ANSWERS 144

Departments

WASHINGTON REVIEW 146
EQUIPMENT AND MATERIALS 148
PLANTS AND PEOPLE 152
FOR YOUR INFORMATION 156
U. S. PATENT DIGEST 158

Index to Advertisers 197

COVER—Behind the story of the transparent plastic box are the cotton fields of the Deep South, for cotton linters are the backbone of cellulosic plastics from which these containers are made. Fleecy bolls of cotton and a cotton gin are thus the symbols chosen by Peter Piening to depict the story on this month's cover, the seventh in our series on basic materials.



is your product

HOME CONSCIOUS?..

From sweaters and knit goods to hats and hosiery, the next few years are going to be big years in textiles. Silks and rayons, cottons and linens, nylons and wools, are all bidding for part of the five billion dollar national market*. More and more of these manufacturers — 190 million in the sweater and knit goods branches alone — are turning to home conscious set-up boxes. Individual packaging instead of bulk packaging, new machinery, adequate labor supply and financial adjustments will soon make possible the expected ten percent increase in textile sales. Manufacturers of home conscious textiles can realize their share of the ten percent increase, thanks to set-up boxes with their added strength, economy and shipping convenience, taking your message home with the product.

* For a host of other facts and figures, write or call your nearest paper box manufacturer for survey No. (57) "Textile Industries" or "Sweaters and Knitted Goods Industry".

NATIONAL PAPER BOX MANUFACTURERS *Association*

AND COOPERATING SUPPLIERS

Liberty Trust Building • Philadelphia 7, Penn.

FOR INFORMATION OR SERVICE • CONSULT YOUR NEAREST SET-UP BOX MANUFACTURER

Your *Carton*

IT'S WORTH DRESSING UP!

When it's time to bring out new package designs it's time to check these points — the skill of the creator, the convenience of the containers, and the appealing features that dress up the line.

These factors *should* add up to successful carton salesmanship. But the task is not easy when materials are scarce, facilities overloaded, and production unpredictable. More reasons to dress with care!

One basic carton improvement is RIDGELO CLAY COATED BOXBOARD. For clay coating is the smooth, bright, silky-white surface that always dresses up cartons. It is not now in plentiful supply but independent boxmakers are doing their best to serve you.

Ridgelo
CLAY COATED
BOXBOARDS

MADE AT RIDGEFIELD, N. J.
BY LOWE PAPER COMPANY

Representatives
H. B. Royce, Detroit • Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Sons, Inc., Philadelphia

They're Lovely...

A few of the thousands of products that can be made from GEON raw materials

Boldly but beautifully colored shower and window curtains... a delicately shaded shower cap... baby's modern spotproof bib and mother's gay apron... sister's stylish raincape...

All these were fabricated from flexible films made from GEON raw materials. But they're only a handful of the thousands of exciting new products that can be made from GEON. For versatile GEON may be pressure or injection molded, extruded, calendered, cast into sheets or film, or applied as coatings to all types of textiles and papers.

And products made from GEON may have any number of unusual properties in a wide variety of combinations. For example, products made from GEON may be made resistant to water, oils, acids, foods, air, heat, cold, abrasion, mildew, cracking, creasing, and many other normally destructive factors. They may be brilliantly or delicately colored; flexible or rigid; transparent or opaque. There are applications for GEON in literally *every* home, *every* industry.

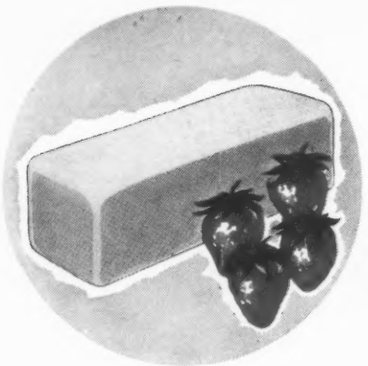
For more information about GEON please write Department L-7, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio.

Geon
Polyvinyl Materials

A TRADE MARK OF B. F. GOODRICH CHEMICAL COMPANY

B. F. Goodrich Chemical Company

A DIVISION OF THE B. F. GOODRICH COMPANY



PACKAGES BY MILPRINT *are packages* THAT SELL!

It is simple mathematics that a good product, *PLUS* a package designed by experts to merchandise its value and its brand, to the consumer—always *EQUALS* consumer preference and increased sales! Consult Milprint today for packages that will build consumer interest in your product, both for today and for the future.

Printed Cellophane, Pliofilm, Glassine, Aluminum Foil, Cellulose Acetate, Vinyl, Lacquer coated and Laminated Papers in all forms, including Sheet Wraps, Rolls, Pouches, or Specialty Bags, Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

Sales Offices at New York • Chicago
Boston • San Francisco • Philadelphia
Grand Rapids • Los Angeles • Cleveland
Dallas • Minneapolis • Cincinnati • Atlanta
Pittsburgh • St. Louis • Indianapolis
Kansas City • Memphis • Rochester

MILPRINT Inc.

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

plants at Milwaukee, Philadelphia, Los Angeles, San Francisco and Tucson

PACKAGING HEADQUARTERS TO AMERICAN INDUSTRY

School's out and the kids are in—in more than ever

for those extra snacks . . . "*See* what you want," says mother. "Help yourself."

Pack in easy to handle, well designed, attractively labeled

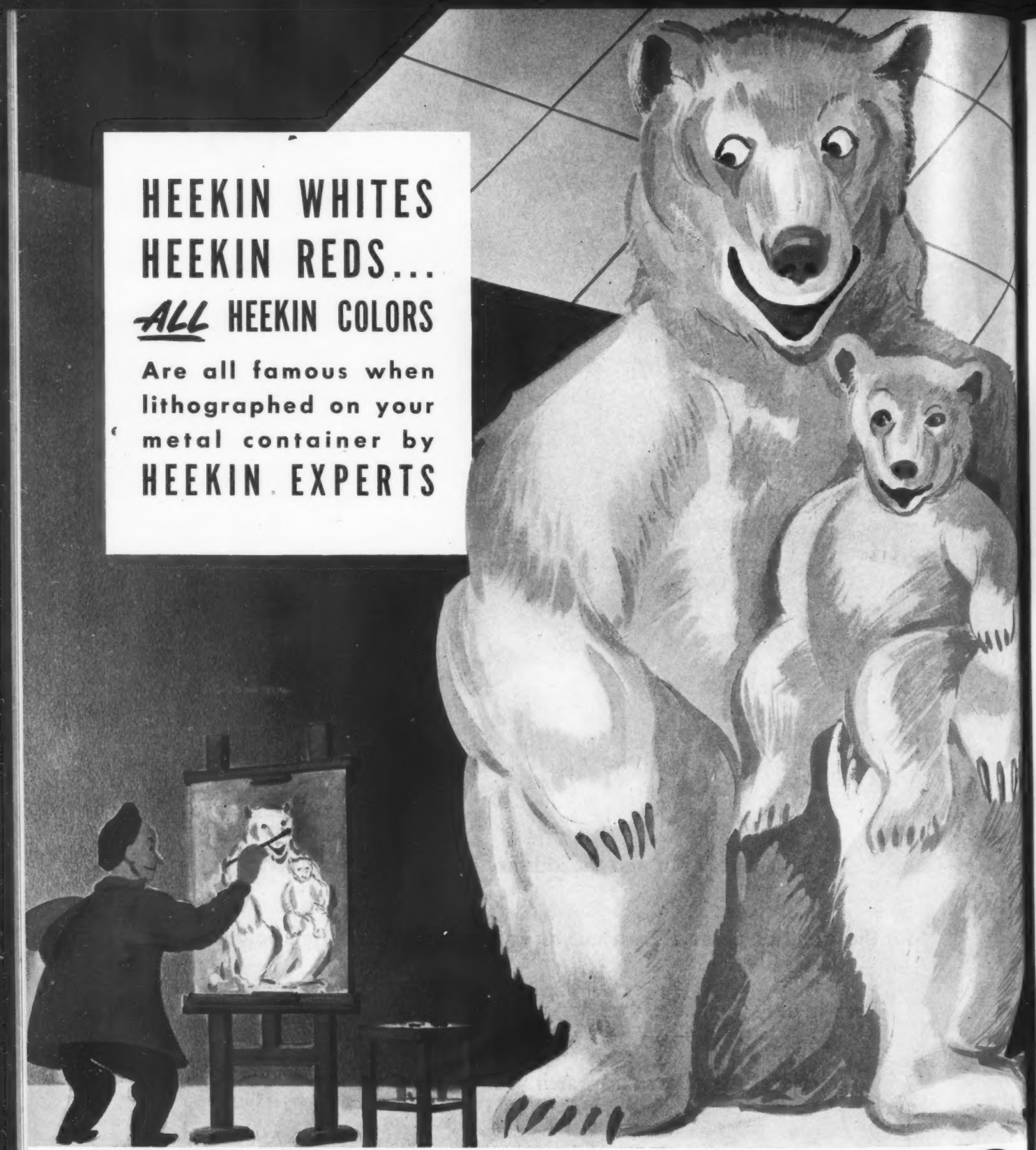
Hazel-Atlas Jars and watch your product lead

the parade from dealers' shelves

to homemakers' cupboards.

HAZEL-ATLAS GLASS CO.

WHEELING, W. VA.



HEEKIN CANS

With Harmonized Colors

THE HEEKIN CAN CO. CINCINNATI 2, OHIO

FINER LITHOGRAPHERS OF METAL CANS SINCE 19

PRIMER OF PERFECT PROTECTION

R is for Raspberries

FROZEN

held at their taste-thrilling, pie-filling best all year round

and for Rhubarb

FRESH

kept tangy, tasty and ripe for enjoyment from garden to table

Fruits and vegetables will soon be reaching market with an out-of-the-garden look and flavor to match—because you'll be sealing them in glittering, transparent **PLIOFILM.** ★ This wondrous packaging material controls moisture gain or loss—seals in all the goodness, natural color and vitamins of fresh and frozen foods alike. ★ So, delicacies will arrive at dinner tables at top of taste and goodness. ★ And such products as steaks and oysters will spend months in the freezer—yet lose nothing in appearance or savor, for they'll be protected against dehydration and "freezer burn" by **PLIOFILM.** ★ Tests by leading food packers have demonstrated all these **PLIOFILM** advantages. One day soon you'll profit by them. For, when **PLIOFILM** returns, your product will enjoy superb quality-protection that spells growing customer satisfaction and sales. Goodyear, Chemical Products Division, Pliofilm Dept., Akron 16, Ohio.

Pliofilm

A PRODUCT OF GOODYEAR RESEARCH

GOODYEAR

THE GREATEST NAME IN RUBBER

Pliofilm—T.M. The Goodyear Tire & Rubber Company

Mark-it for Market

with

PALM BROTHERS DECALS

House of Croydon points with pride to the identification of its fine toiletries with Palm Brothers Decals. And justly so, for discriminating producers everywhere select Palm Brothers Decals for immediate customer recognition of their products—distinctively and positively.

Your products, too, will take on additional character when marked with Palm Brothers Decals. You'll find decided advantage in their ease of application, their permanency and economy.

See for yourself how a Palm Brothers Decal can benefit your product. Write today. We'll be pleased to prepare individually designed sketches, quote prices, and furnish complete information. No obligation, of course.

THE PALM BROTHERS *Decalcomania Co.*

CINCINNATI...12...OHIO..U.S.A.

THIS IS NUMBER SEVEN IN A SERIES ILLUSTRATING THE HISTORY OF PAPERBOARD AND FOLDING CARTONS

"WE ARE VERY PLEASED," SAID HIS MAJESTY

History tells us that George III of England was very pleased with the paper boxes made by Mrs. Delaney, an elderly gentlewoman, who presented samples of her handiwork to His Majesty. Mrs. Delaney's boxes were made of pieces of multi-colored paper, arranged into elaborate designs. Many of her boxes found their way into art collections and public museums. This was in 1774. About 80 years later folding cartons made their first appearance and became one of the most potent factors in the development of modern merchandising methods.

UNITED PAPERBOARD COMPANY, INC.
PAPERBOARD FOLDING CARTONS
285 MADISON AVENUE NEW YORK 17, N. Y.

A complete series of these illustrations consisting of 12 pictures and carrying no advertising, will be sent on request.

More eyes

reach for your product

IN WHITER, BRIGHTER COATED LITHWITE CARTONS

Shoppers' hands reach only after their eyes reach... in the modern self-serve store

A STAND-OUT PRODUCT IS FINE. But as modern retailing swings more and more to super markets and self-service, a stand-out *package* is becoming increasingly important. That's why the makers of many of America's leading products were quick to see the eye-catching advantages of *Coated* Lithwite cartons.

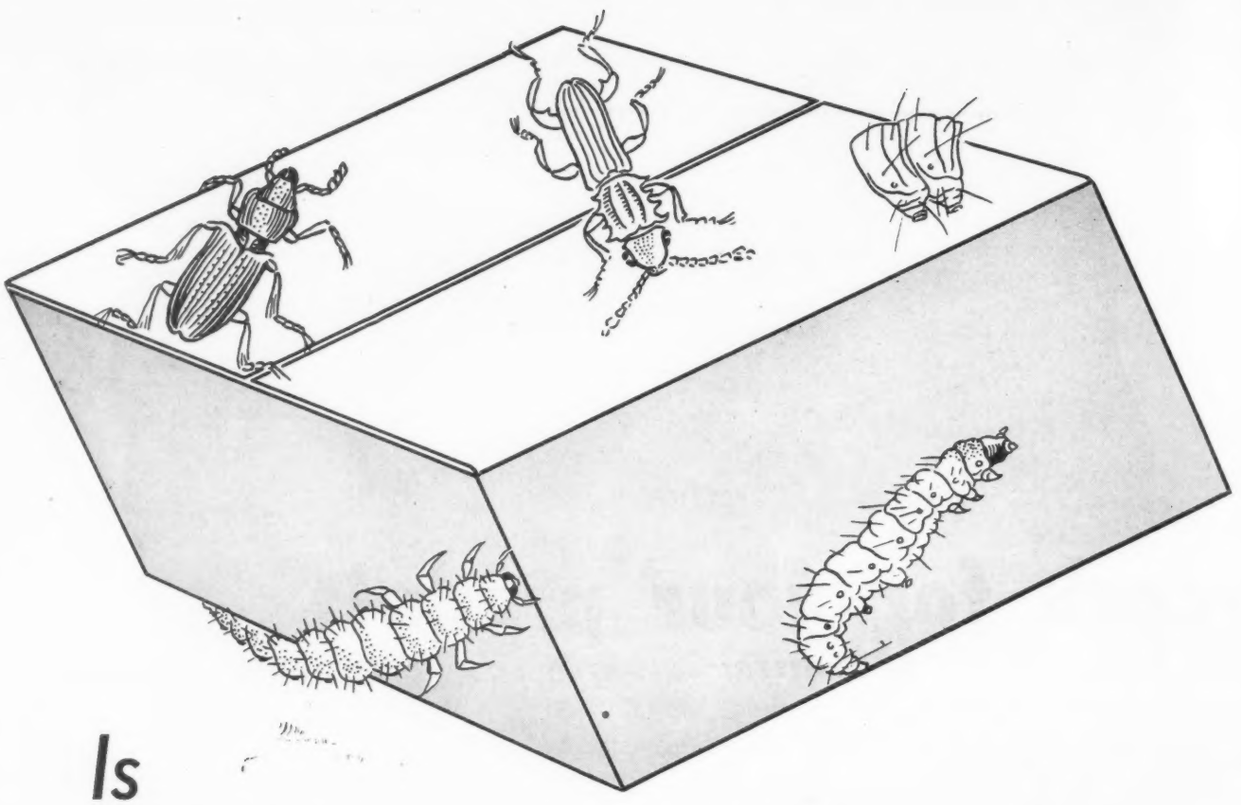
For *Coated* Lithwite cartons stand out in shelf mass and island displays . . . reach out for attention . . . make more "impulse" sales. A revolutionary new kind of paperboard, that is made and coated in one high-speed operation, *Coated* Lithwite is whiter, brighter. Its smooth, chalk-free surface is a perfect base for printing inks. It makes colors *sing*. It brings pictures vividly, realistically to *life*.

You'll find you have fewer jammers and leakers with *Coated* Lithwite cartons, too. They fold accurately without shattering or flaking, give a tight, positive seal. Production is currently sold up, but now's a good time to lay future plans, discuss time-proved, sales-proved *Coated* Lithwite cartons with a Gardner Richardson representative.

Coated Lithwite Cartons

THE GARDNER-RICHARDSON CO. • Manufacturers of Folding Cartons and Boxboard • Middletown, Ohio

Sales Representatives In Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT



Is INFESTATION

one of your problems?

Nothing can do more damage to the reputation and the sales of your product than insect infestation. It is well worth your while to seek out certain prevention. A simple and sure way of protection has been worked out that will give your package both moisture-vapor-proof qualities and resistance to insect infestation. Darex Thermoplastic Coating Materials provide hard, continuous films that offer no crevices or toeholds for entry, and that resist the effects of boring. The application of Darex Thermoplastic Coatings is simple. It can be hooked into your regular packaging line — used for whatever portion of your pack or whatever season of the year necessitates it. It involves no changes in your standard package. And it is sure protection in two directions. Isn't that worth looking into?

PACKAGING DIVISION DEWEY AND ALMY CHEMICAL COMPANY CAMBRIDGE 40, MASSACHUSETTS

DAREX THERMOPLASTIC COATING MATERIALS

Combs and brushes packaged in gleaming acetate by Shaw-Randall are never orphans on the retailer's shelves. Visibility means saleability and the harmonious styling of this Shaw-Randall package gives added sales appeal to the comb and brushes on display.

LET THE CREATIVE AND PRODUCTION FACILITIES OF

KEEP YOUR PRODUCT MOVING

SHAW-RANDALL CO.

DESIGNERS and CREATORS of VISIBLE PACKAGES

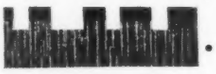
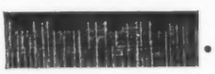
PAWTUCKET • RHODE ISLAND

A DIVISION OF SHAW PAPER BOX COMPANY

SALES REPRESENTATIVES

Fred Mann & Co., New York; H. B. W. Snelling, Boston; L. T. Swallow & Associates, Detroit

Does this straighten you out?* Your thumb is a printing plate — the design is there and all you have to do is press it onto an ink pad, then onto a piece of paper, and you have "surface" printing. If you greatly magnified an end view of the skin from your thumb, it would look like this .

When you press it on the ink pad you only put ink on the high spots like this  . The fingerprint comes from the inked surfaces only, hence this is "surface" printing. Now to clear up "intaglio" and "rotogravure" style printing. Going back to the end view of your skin in both "intag" and "roto" processes, you smear ink all over everything on the plate — high and low spots — like this  . Then you wipe off (with a "doctor" blade or scraper) the ink on the high spots, leaving it in the wells between and you get this .

When you press the paper against this surface the ink is drawn out of the wells by the paper, and transfers the design to the paper surface; at least it will, if you do it right, and doing right in packaging paper is the business of MATTHIAS PAPER CORPORATION at 165 W. Berks St., Philadelphia 22, Pa.; Box 127, Wellesley 81, Mass.; Guilford Building, Greensboro, N. C.

* So many students flunked on the printing process question, we are trying it again.

ALL THESE PRODUCTS HAVE SUCCESSFULLY PASSED THE *90-day test*

ADHESIVES
Collodion Cements
Lacquer Cements
Library Pastes
Rubber Cements

COSMETICS
Brushless Shave Creams
Brush-type Shave Creams
Cleansing Creams
Cold Creams
Hair Wave Set Preparations
Hand Creams
Hand Lotions
Insect Repellent Creams
Liquefying Creams
Mascara Compounds
Shampoo Creams
Tissue Creams
Vanishing Creams

DENTIFRICES
Alkaline Tooth Pastes
Antiseptic Tooth Pastes
Neutral Tooth Pastes

DETERGENTS
Hand Soap Pastes
Paint Cleaner Pastes
Wallpaper Cleaner Pastes

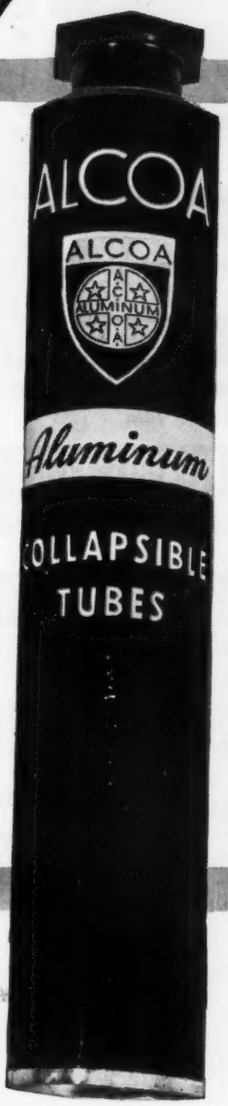
FOODS
Anchovy Pastes
Compound Fruit Jams and Jellies
Concentrated Citrus Juices
Confection Toppings
Honey, 100% Pure
Peanut Butter
Cream Cheese Spreads
Sardellen Butter

PHARMACEUTICALS
Ammoniated Mercury Ointment*
Analgesic Balms
Antiseptic Ointments
Belladonna Ointments*
Boric Acid Ointments*
Calamine Ointments
Chloramine-T Ointments
Chrysarobin Ointments*
Diachylon Ointments*
Eczema Ointments
Guaicol Ointments
Hormone & Vitamin Ointments
Iodine Ointments*
Iodoform Ointments*
Mercurial Ointments*
Mercuric Nitrate Ointments*
Nasal Jellies
Nutgall Ointments*
Ophthalmic Ointments
Phenol Ointments*
Rose Water Ointments*
Sterile Lubricating Jellies
Stramonium Ointments*
Sulfadiazine Ointments
Sulphur Ointments*
Tannic Acid Ointments*
Tar Ointments*
Unguentum*
Venereal Jellies
Yellow Mercuric Oxide Ointments*
Zinc Oxide Ointments*

TECHNICAL & MISC. PRODUCTS
Buffing Compound
Caulking Compound
Concentrated Color Paste
Lubricating Greases
Printers Inks
Soft Putties

SHOE POLISHES
Shoe Creams
Shoe Paste Polish

*U.S.P.



Is anything *you* make listed here? If so you can probably take advantage of Alcoa Aluminum Tubes for packing it.

This is a list of the types of products that have successfully undergone tests in Alcoa Tubes. They have been held for at least 90 days at a temperature of 100 to 105 degrees F. Examined at the end of that time, there has been no reaction whatever between tube and contents.

In fact, not until your product has been tested in this way will Alcoa Tubes be recommended for it. If the test shows any reaction in a *plain* aluminum tube, tests will be made in aluminum tubes with various kinds of inside coatings to prove that they are 100% safe to use.

Let the Alcoa Packaging Laboratory test your product in Alcoa Aluminum Tubes. You will like them for their strength, beauty, lightness, and economy. Consult the nearest Alcoa sales office or write ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA FIRST IN **ALUMINUM** REG. T. M.

flexibility...

GLU-WELD
water-resistant adhesiv

TUBE WINDING
adhesives, both paper an
cellulose film

FLEXIBLE GLUES
for better non-warp qualitie

LABELLING ADHESIVES
labels to tin, glass, foil, films, and paper

WINDOW ADHESIVES
for all cellulose films in window carton work

SPECIALTY ADHESIVES
You name the problem
We have the adhesive

UNION PASTE COMPANY

INTER-OFFICE MEMO

TO: All Salesmen and Advertising Dept.

Present shortage of vegetable and animal base adhesives is acute - no relief in sight. Take immediate steps to inform customers of this and offer our resin emulsions and resin-latex compounds. These are available and we know with our experiences they will outperform older types in many instances.

CONTAINER ADHESIVES by

UPACO

...rigidity

UPACO . . . a name recognized as a symbol of quality in all phases of adhesive manufacture. **UPACO** products **rigidly** conform to specifications for their particular uses and the line is completely **flexible** to meet any adhesive problem. You cannot do better anywhere.

UNION PASTE COMPANY
Hyde Park, Massachusetts

bulkton foils

bulkton foils

bulkton foils

the ultimate in display packaging

Watch the child go for the foil-packaged candy . . . or the sophisticated woman reach first for the foil-covered box. Yes, it's a well known fact that foil has both mass and class appeal.

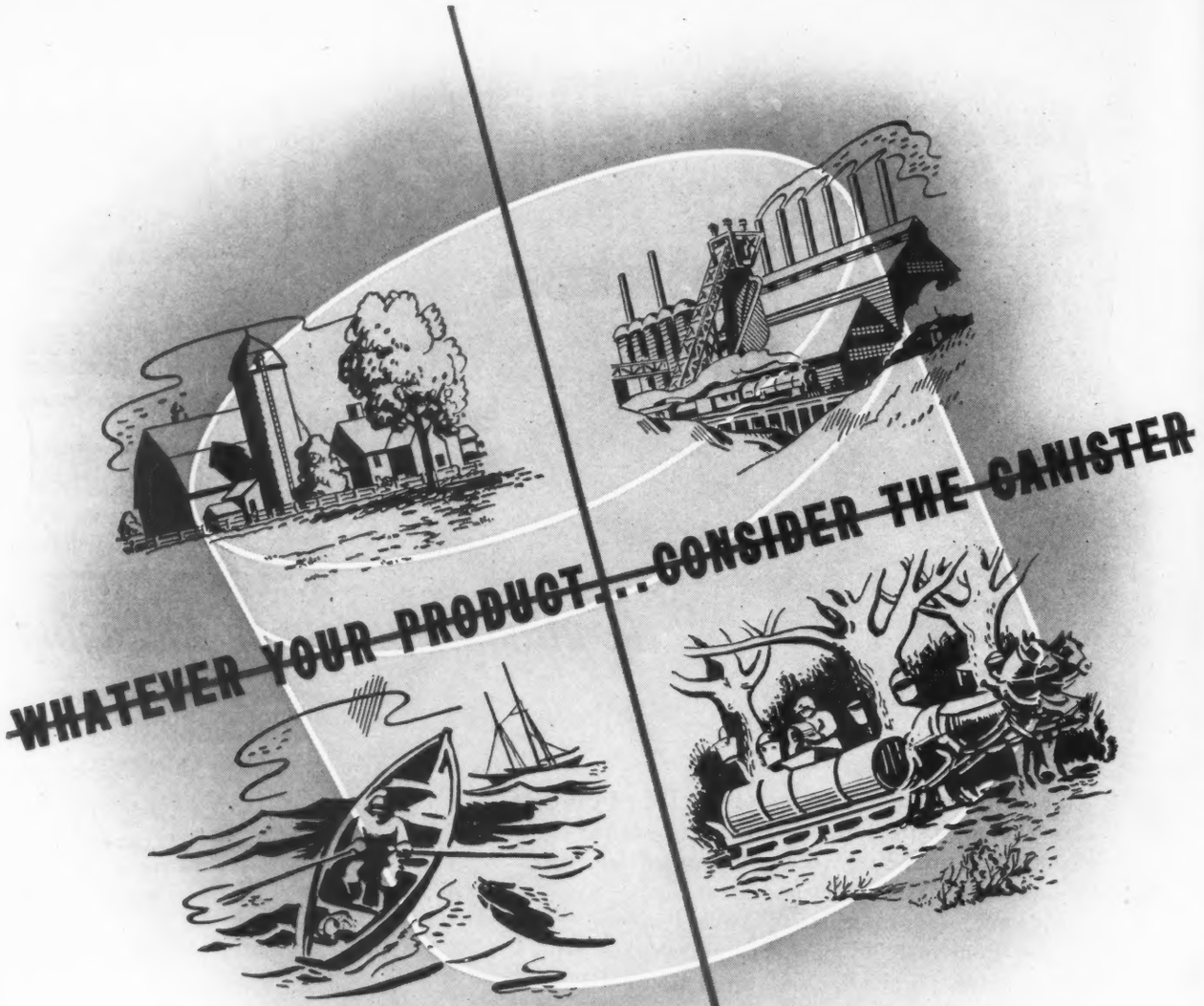
Bulkton aluminum foils are available again. You can get them in rolls or sheets and choose from the extensive range of sales-tested colors. They come from dark burgundy, through dull and bright golds, blues, greens and silvers, to delicate pastel shades. New embossed designs are constantly added.

Whether you use them for box covers, gift wraps, labels, displays or in any other way, Bulkton Foils will put your merchandise in the best-seller class.

Basis 20 x 26—500—26" Rolls	Pre-gummed
30 — 40 — 45 — 50 — 60 lb.	45 & 60 lb.

Write for Color Chart or Sample Sheets

BULKLEY, DUNTON & CO.
INCORPORATED
295 MADISON AVENUE, NEW YORK 17, N. Y.
CHICAGO 16, 2635 South Wabash Avenue • LOS ANGELES 13, 124 West 4th Street



From the handling of varied products of farm, forest and factory — to the safe and salable shipment of fancy fillets — there is a canister for every use. Utilizing the strongest structural form (other than the sphere) the canister can "take it" and deliver! Lined, or impregnated for moisture resistance — printed, or covered with decorative paper for sales appeal — the canister combines a distinctive, identifying shape for your product, with down-to-earth strength and adaptability. Whether you pack marjoram or maple sugar — talcum or taffy, you'll save with safety by using the canister . . . proven in war — preferred in peace.

Write today for completely illustrated NEW DESIGN FOLDER, to Old Dominion Box Company, Inc., Dept. 13, Charlotte, North Carolina.

OLD DOMINION *Box Company Inc.*

PLANTS LOCATED THROUGHOUT THE SOUTH
NEW YORK REPRESENTATIVE
228 EAST 45th ST., NEW YORK 17, N. Y.
Phone Mu 2-6492

CHARLOTTE • N. CAROLINA

PRECISION BUILT PAPER BOXES AND PACKAGING MATERIAL

DON'T LEAVE HIM ALONE

..."IN THE DARK"

Anchorglass Containers

LET HIM SEE WHAT HE'S BUYING

HE'S a big and brave fellow, until the Mrs. sends him marketing. Then he's alone in the dark—lost in a sea of merchandise. The most impulsive of impulse buyers, he snatches up whatever "looks good," planks down his cash and high-tails it for home.

The Mrs. is a far more deliberate buyer, a seasoned purchasing agent. But she's susceptible to whatever "looks good" too . . . and a ready buyer of the good things she can see.

That's why sparkling, clear Anchorglass Containers are gaining favor with food packers everywhere. They instantly display the colorful eye and appetite appeal of the contents and deliver your choice foods to the consumer without losing any of the original goodness packaged at your plant.

Anchorglass Containers impart no foreign tastes or flavors. They are safe and easy to open and can be tightly resealed to protect unused portions of food. They are convenient, sanitary and attractive packages that honestly reveal the nature and quantity of the contents at all times.

Anchorglass Containers offer you the solution to many of your packaging and merchandising problems.

Anchor
CONTAINERS and CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS
CORPORATION
LANCASTER, OHIO

GOBELIN . . . . . fit for a King

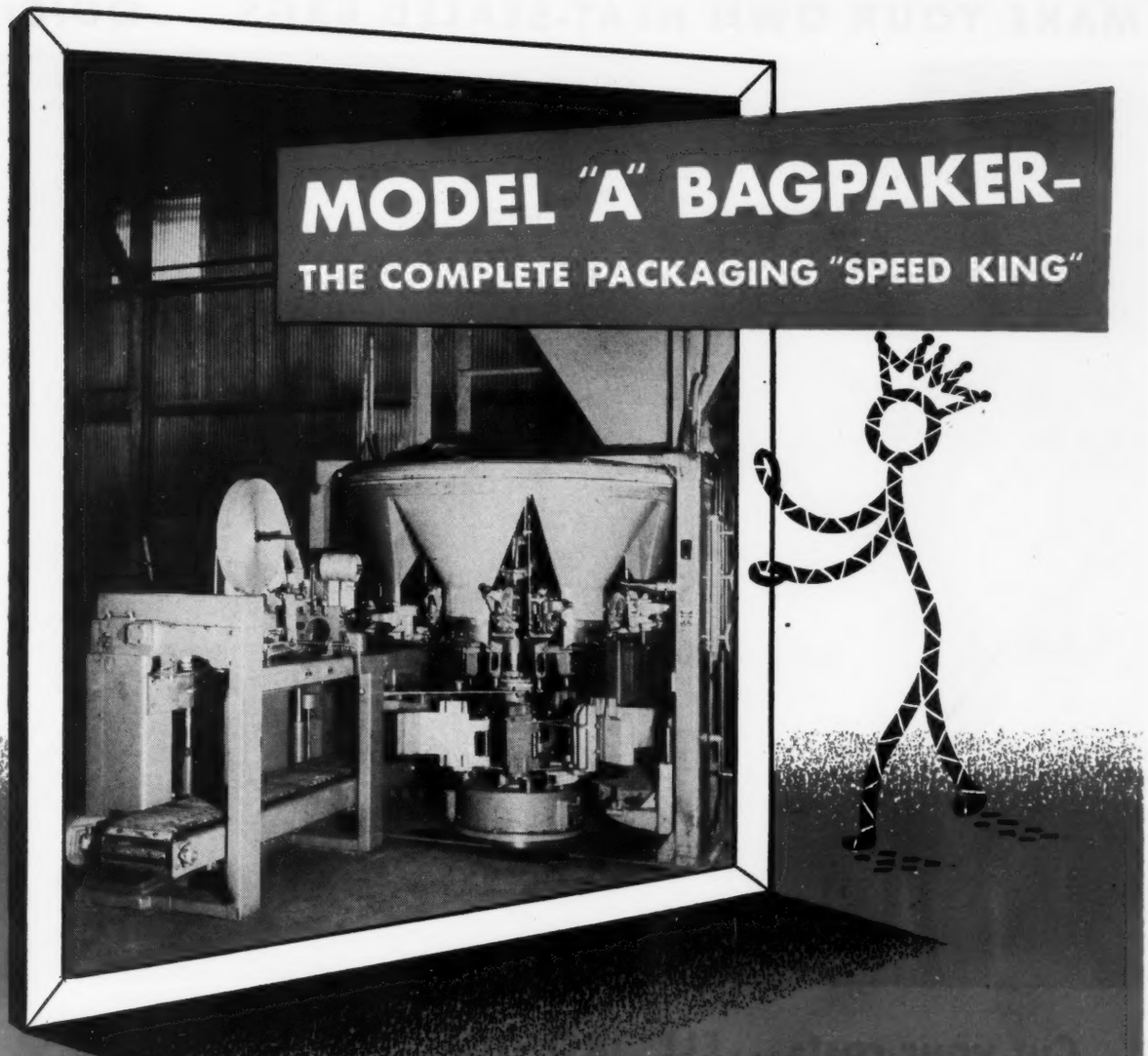
Louis the XIV had an eye for beauty. The splendor of his court was unexcelled in all of Europe. Always on the alert for products of unusual excellence, it was only natural that he would be attracted by the exquisite quality and beauty of Gobelin tapestry. In fact, he was so impressed with this fine material that he purchased the factory in which it was made . . . put Le Brun, his royal painter, to work creating designs . . . and diverted the production to tapestries primarily for royal use.

Gobelin tapestry is characterized by the excellence of the material, the wide range and quality of the dyes and superb craftsmanship. It takes its name from a French family which established a dye works in Paris during the 15th century. Later, descendants of this same family established the tapestry manufactory that was purchased by Louis XIV. This factory still turns out tapestry of unusual excellence and is still under the jurisdiction of the State.

To the discerning buyer of commercial glass containers, Carr-Lowrey products have comparable significance. Strict adherence to the highest standards in glass manufacture for over half a century has earned the confidence and respect of quality minded buyers.

CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE 3, MD. *New York Office:* 500 FIFTH AVE. (18) *Chicago Office:* 1502 MERCHANDISE MART (54)



MODEL "A" BAGPAKER—

THE COMPLETE PACKAGING "SPEED KING"

The Cushion Stitch Closure

The proper closure or seal for a multiwall paper bag is a vital factor —the Bagpak Cushion Stitch was invented and perfected to provide the perfect solution to this problem. The sewing unit of the Bagpaker described here lays a thick, compressible cord across the end of the bag and stitches AROUND the cord, without going through it, a "snake" or cross stitch of sewing thread. This thick cord forms a cushion or shock absorber that takes up the strains of handling or dropping the bag and prevents the stitching from pulling through the bag walls.

Natural Kraft or Asphalt Laminated tape is applied over the stitching thus sealing the needle holes. This closure becomes the strongest, most moisture-proof part of the bag.

The Model "A" Bagpaker (illustrated) packs fifteen 100 lb. multiwall paper bags per minute—with only one operator—FORTY FIVE TONS PER HOUR. It performs the *complete* packing cycle . . . *it weighs . . . fills . . . closes and seals the bag with the nationally known Cushion Stitch closure.* Two of the larger manufacturers of chemicals are now installing additional units . . . *positive proof* of the splendid economies obtainable by this method of packaging. Consult our engineers in your territory—they will gladly study your problem.

TRADE MARK REG. U. S. PAT. OFF.

INTERNATIONAL PAPER PRODUCTS DIVISION

INTERNATIONAL PAPER COMPANY

220 East 42nd Street, New York 17, N. Y.

Branch Offices: Atlanta, Baltimore, Boston, Camden, Ark., Chicago, Cleveland, Philadelphia, Pittsburgh, St. Louis

Agents for BAGPAK, INCORPORATED • GEORGE & SHERRARD PAPER CO.

ONE MAN PACKAGE EASY TO HANDLE

MAKE YOUR OWN HEAT-SEALED BAGS . . . *QUICKER!*

Cut your costs . . . ELECTRONICALLY . . . with this high-output, low-cost bag-maker

Now you can cut your bag expense and greatly increase your output with the new Kono-Mead Bag Builder, now coming off the assembly line daily.

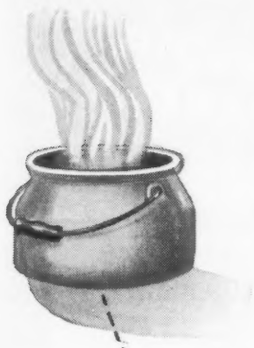
This machine is electronically controlled, to produce heat-sealed bags at a cost-cutting rate of 4 thousand to 15 thousand bags per hour. And one girl can easily operate it!

Bags can be flat or square, from 1½ to 9 inches wide and from 2 to 18 inches in length. May be made of Konophane, Pliofilm, cellophane, diaphane or any of the heat-sealing coated papers. For additional strength and protection, heat-sealing can be combined with glue-sealing, thus producing a seam stronger than the material itself.

Write for full particulars.

Kono-Mead

KONO-MEAD EQUIPMENT CO. 133-23 35th Ave., Flushing, N. Y. Phone: FLushing 3-8113



You've sniffed the clouds of rich smells rising from a kettleful of home-made soup . . . inhaled the appetizing aromas of simmering beef or chicken stock, spices and seasoning, fresh vegetables.

You'll find all those aromas and flavors captured in the modern dehydrated soup mixes. Flavor and aroma are protected from the soup maker's plant to the kitchen in a heat-seal package made of aluminum foil.

The combination of Alcoa Aluminum Foil and heat-sealing *locks in* the goodness and flavor of soup mixes and other dehydrated foods, *locks out* air and foreign odors. Prevents rancidity and oxidation. The package is greaseproof and moistureproof . . . and is easy for the homemaker to open.

Package designers and converters of Alcoa Aluminum Foil will be glad to work with you on a package of this type for your product, fresh or dehydrated. For their names, get in touch with our nearest sales office. Or write to ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

How to wrap up that good aroma

OF MOM'S KITCHEN ON "SOUP DAY"

ALCOA ALUMINUM FOIL

JAR CLOSURES! IMMEDIATE DELIVERY!

A diversity of colors, styles and sizes including standard 33, 38, 43, 45, 48, 51, 53, 58, 63, 70, 83 and 100 mm.

They're here! Plastic molded jar closures are now in full production . . . and at a lowered price scale! New MACK MOLDING automatic set-ups permit greater production economies and efficiencies.

They're good! Plastic molded closures combine rigidity and strength with smart lustrous eye-appeal. They are sanitary, non-corrosive and easily cleaned.

They're accepted! Easily removed, easily replaced—just ask the customer. Write, wire or telephone us about your requirements; your inquiries will be treated in confidence.

If you are not already acquainted with the facilities offered by our three complete and up-to-date plants, the new 8 page booklet "MACK MOLDED EXCELLENCE" will be sent on request. Write for your copy today.

MACK MOLDING COMPANY
INCORPORATED
160 MAIN STREET, WAYNE, NEW JERSEY

Mack MOLDED EXCELLENCE

SALES OFFICES: NEW YORK CITY, CHICAGO, DETROIT, INDIANAPOLIS, BOSTON & ST. LOUIS

PAX TAPE QUALITY IS BETTER FOR BETTER PACKAGING

Packaging designers are partial to PAX TAPE because of its uniform dependability in the solution of many modern packaging problems.

PAX TAPE seals instantly without moistening. It sticks stronger, lasts longer.

Use PAX TAPE for permanent anchorage on "hard-to-seal" packages and containers; and for many types of protective wrapping. PAX TAPE smartens up the package while doing an effective utility job.

TRY PAX TAPE

The BETTER Tape

Transparent and in Colors

THE COFAX CORPORATION • Lynbrook, N. Y.

Beauty counts in a Cameo

The art of carving cameos is almost as old as history. As early as 700 B. C., the ancient Phoenicians took delight in fashioning crude cameos from ostrich eggs and seashells. Later, as the art developed, cameos were carved on precious or semi-precious stones and glass. But always cameos were distinguished for their rare striking beauty.

Today, CAMEO brings the same beauty of workmanship to the packaging industries—specializing in the creation and manufacture of finely embossed designs on labels, seals, tags, wraps and package decorations. Indeed, CAMEO creations today identify leading products in many fields where beauty is a "must": cosmetics, apparel, tobacco, sporting goods, food and drugs.

As beautiful as a cameo are our three-dimensional designs and reproductions in multi-color.

Samples on request.

IN CANADA: CAMEO CRAFTS INC.
157 ST. PAUL ST. WEST, MONTREAL

CAMEO
DIE AND LABEL COMPANY
DESIGNERS and CRAFTSMEN
154 WEST 14th STREET
NEW YORK 11, N. Y.
WATKINS 9-8484

Perfect!

for
PACKAGING FRUITS and VEGETABLES
fresh or frozen!

Moisture Stays In!
Moisture Stays Out!

PRIME-PAC

A TRACO PEARLON PRODUCT

Western Packer adopts Prime-Pac for 25-lb. carton packs!!

●

Southern Packer adopts Prime-Pac bags for frozen shrimp!!

●

Northern Packer adopts Prime-Pac bag liner for frozen cream!!

●

Perfect for Meats—Poultry—Fish!!

● Highly Moistureproof, Retains Garden Fresh Flavors! Odorless, Tasteless, Non-Toxic, Durable, Heatseals, Flexible at very low temperatures. Washable—Consumer can re-use bag time and again!

●

Write or Wire ... Dept. B
358 WEST ONTARIO ST.
CHICAGO 10, ILLINOIS

Traver CORPORATION

CONVERTERS—PRINTERS—CELLOPHANE—FOIL—ACETATES—GLASSINE—PLASTICS

Here's the new

filmonize TRADE MARK REG.

Scripton

PRINTED OR PLAIN

We print your label on* SCRIPTON *— you make your fill-ins with pencil, crayon or rubber stamp. Or — you write or rubber-stamp individual labels as needed.

PRINTED

THIS CONTAINER IS
RETURNABLE

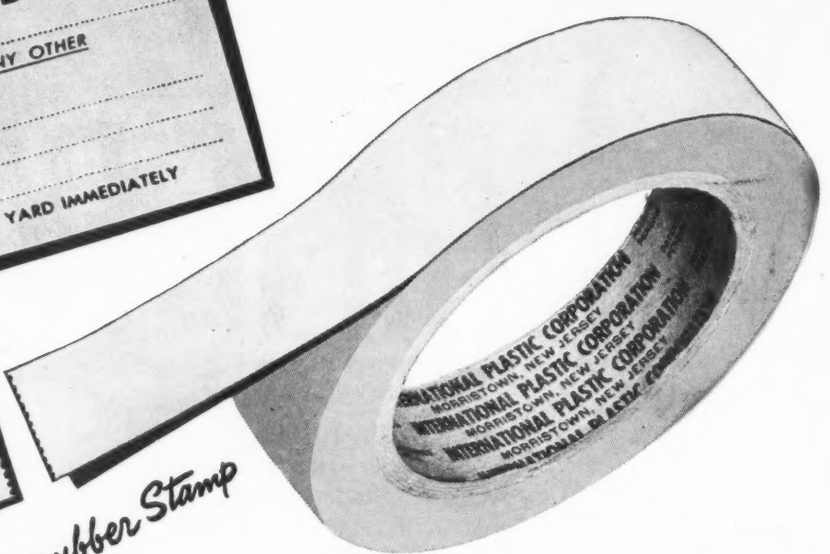
LAST CONTAINED .....
MUST NOT BE USED FOR ANY OTHER MATERIAL

PURCHASE ORDER OH .....
RETURN ORDER ROC .....
VENDOR .....
EMPTY AND RETURN TO DRUM YARD IMMEDIATELY

OR PLAIN

WRITE YOUR OWN LABELS

with pencil, crayon, rubber Stamp



With SCRIPTON — printed or plain — you now get clear, readable, self-sealing labels that stick instantly. (Use no water or hot iron — just press on.) The tape itself has top tensile strength. The new-type adhesive is effective from 150° to −20° Fahrenheit and withstands sudden temperature changes.

Your SCRIPTON label is printed to your own specifications — in any width from ½" to 18". It is sold in minimum quantities, or in multiples, of 9 rolls. Plain SCRIPTON is sold in any quantity desired.

You have a great many time- and labor-saving uses for SCRIPTON. Get in touch with your wholesaler today — or write us — for suggestions and full details.

filmonize TRADE MARK REG.

SELF-SEALING TAPES

Makers of all types of self-sealing industrial tapes— cellulosic, metallic and paper.

INTERNATIONAL PLASTIC CORPORATION
10 Park Place **Morristown, N. J.**

Neither snow-nor rain-nor heat... nor

any other combination of mailing hazards . . .stays these carriers from the swift completion of their appointed rounds. Bausch & Lomb Company of Rochester, N. Y., one of the world's truly great optical plants, consistently use Mason MailMasters for safe, swift and convenient shipping. Ideally suited for assembly line packaging, their rugged strength, convenient sizes and exclusive wire fasteners adapt themselves equally well to individual shipping. Take a tip from Bausch & Lomb — ship by Mason MailMaster.

If you are in the optical business inquire about the Mason MailMaster with the convenient return labels.

Write today to Dept. (25) The Mason Box Company, Attleboro Falls, Mass., for the new Mason catalog of standard size shipping boxes.

The MASON BOX COMPANY

MANUFACTURERS OF AMERICA'S NUMBER ONE BOX . . . THE MASON MAILMASTER

"The bigger the family—the better the service"

CONTINENTAL CAN COMPANY, INC.

CONTINENTAL PAPER DIVISION

PAPER DIVISION Headquarters
330 W. 42d St., New York 18, N. Y.

COMBINATION PAPER AND METAL CONTAINERS

LIQUID-TIGHT FOOD CONTAINERS

MONO PAPER CUPS

FIBRE DRUMS The Container Co., Van Wert, Ohio

Sales offices in all principal cities

By now, we had hoped we could put our feet on the desk and supply you with all the Continental fibre drums you needed. But in spite of our plans for 100% greater postwar output—in spite of greater production capacity—adverse conditions have made it impossible for us to meet even normal demands. Meanwhile, Continental—a big family and growing bigger—is making every effort to uphold its tradition of "best in quality, best in service".

Lamcote REFLECTS THE QUALITY OF QUALITY PRODUCTS

LAMCOTE

helps YOUR package step over the counter into the arms of eager "eye buyers"

Customers reach for these expensive-looking packages. Their lustrous beauty immediately attracts the eye. This tough, flexible protection adds rich brilliance to every type of printing—glorifies the finest design. Grime and moisture-repellent, it reduces loss through soiled or damaged merchandise. Keeps packages constantly new-looking for quick customer pick-up!

SEND TODAY for samples and full details about LAMCOTE. Ideal for mailing folders, point-of-purchase displays, broadsides, catalogs, die-cut novelties, box-wraps, fabrics, specialties and 1001 OTHER USES.

Lamcote

THE PROCESS of permanently affixing a lustrous, transparent, tough film of plastic to the surface of paper, cardboard, fabric or other material.

QUALITY PRODUCTS SINCE 1909 — METAL PAPERBOARD PLASTIC

ARVEY CORPORATION

3462 N. Kimball Ave.
Chicago 18, Illinois

•

300 Communipaw Ave.
Jersey City 4, New Jersey

SPECIALTY PAPERS

LAYOUT PRINTED
PACKAGING PAPERS

GIFT WRAPS

DECOTONE PRODUCTS DIVISION

CUSTOM-CREATES PACKAGING MATERIALS FOR SPECIFIC PRODUCT NEEDS

PACKAGING PAPERS

MOISTURE-VAPOR PROOF PAPERS

PROTECTIVE COATED SPECIALTIES

PAPER-BACKED ALUMINUM FOIL

PRINTED & EMBOSSED BOX WRAPS

PRINTED TRADE MARK PAPERS

LAMINATED PAPERS

HEAT-SEALING PAPERS

and Many Others

DECOTONE PRODUCTS
DIVISION
Fitchburg Paper Company

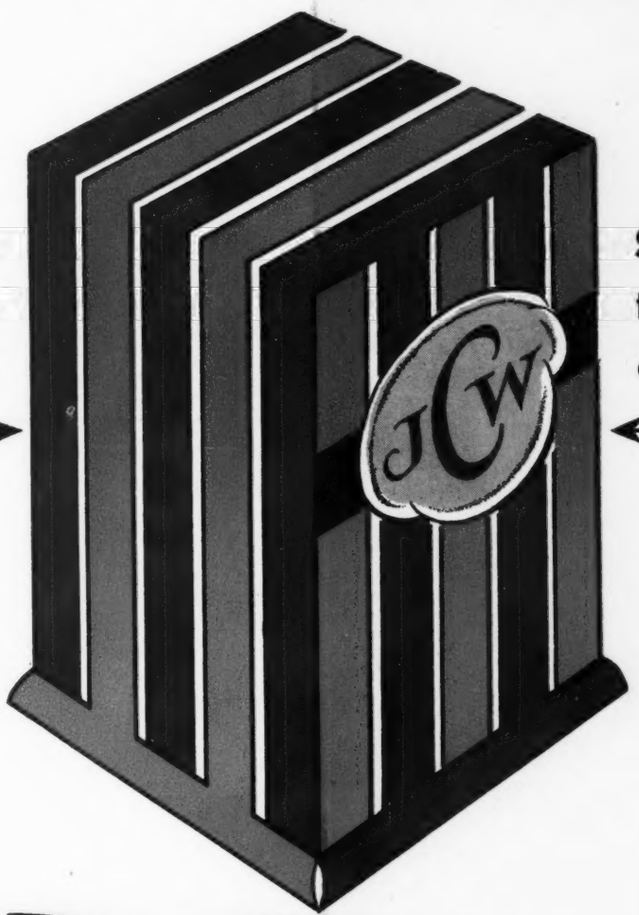
PACKAGING PAPERS *Converted Papers* SPECIALTY PAPERS

FITCHBURG, MASS.

LUSTRALITE

YOUR fine product deserves the best in a glossy, highly protective coating for its label, wrap, or cover. Put your product out in front and stay out in front with our new brilliant-gloss finish, "Lustralite", which by its exceptional protective characteristics maintains its eye-appeal intact—not just on the store shelf, but during use in the home until your product is finally consumed.

FEEL the difference



SEE the difference

USE LUSTRALITE TO...

1. Improve your present varnish or lacquer finish
2. Replace acetate or cellophane lamination at reduced cost.

"Lustralite" is a distinct film, waterwhite, flexible, thermoplastic, unusually resistant to alcohol, oils, alkalis, water, moisture, most chemicals.

Send us samples of your wraps, labels, etc., and we will gladly LUSTRALITE them without charge

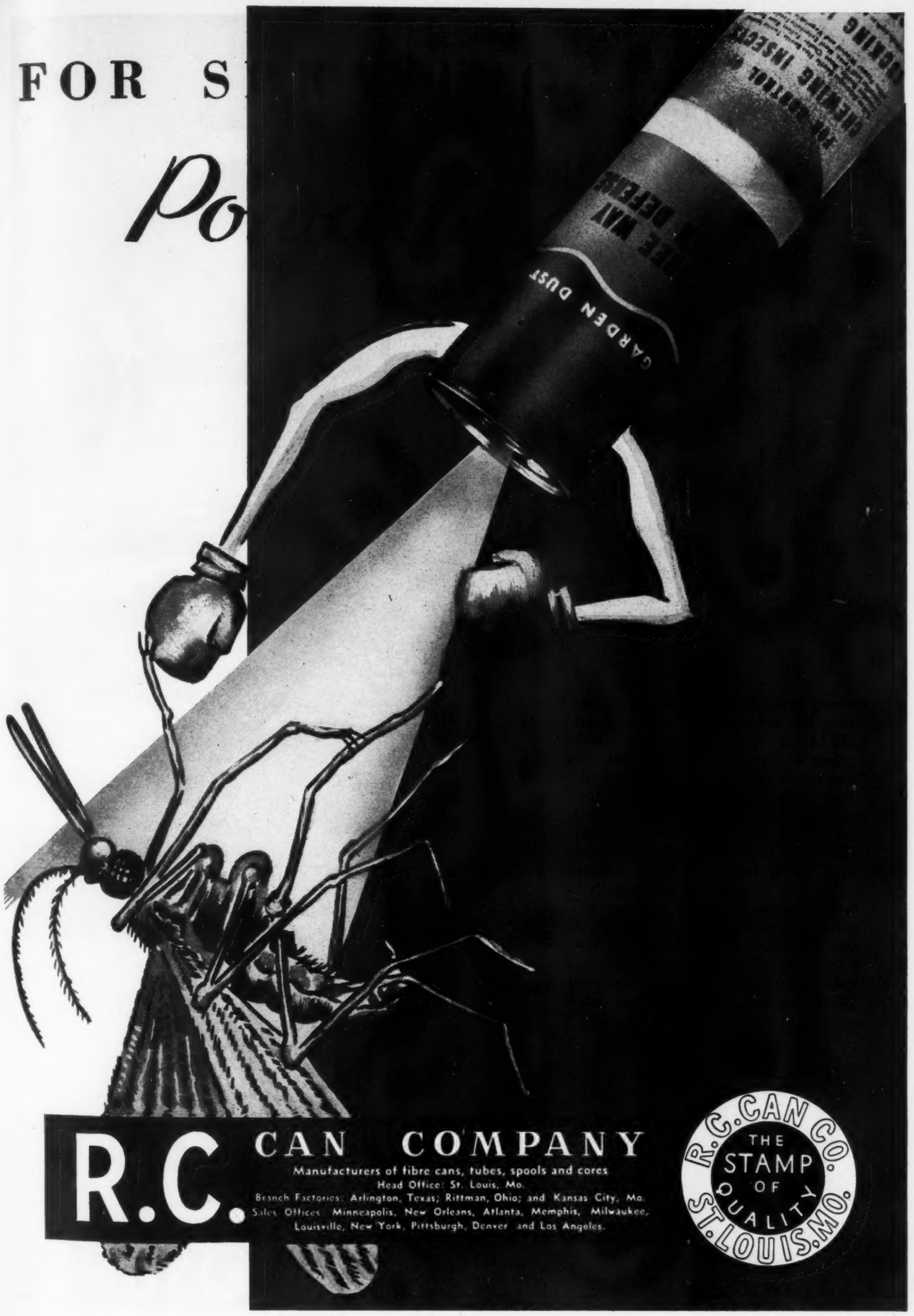
John W. Crawford Co.

Est. 1859 • 160 VARICK ST., NEW YORK 13, N. Y. • WAlker 5-5473

FINISHERS TO THE PRINTING AND LITHOGRAPHIC TRADES
EMBOSSING • STRAIGHT CUTTING • HIGH DIE CUTTING • PUNCHING
PARAFFINING • GUMMING • VARNISHING • LACQUERING
LUSTRALITING of paper in sheets

FOR S

Po



R.C. CAN COMPANY

Manufacturers of fibre cans, tubes, spools and cores
Head Office: St. Louis, Mo.
Branch Factories: Arlington, Texas; Rittman, Ohio; and Kansas City, Mo.
Sales Offices: Minneapolis, New Orleans, Atlanta, Memphis, Milwaukee, Louisville, New York, Pittsburgh, Denver and Los Angeles.

R.C. CAN CO. THE STAMP OF QUALITY ST. LOUIS, MO.

Most fellows who carry lunches to work day after day find that sandwiches can become monotonous. Here's a wrinkle that puts new zest in the old lunch pail. Durkee's Salad Dressing perks up the flavor and makes all kinds of sandwiches more appetizing. It's fine for salads, fish, meat and cheese dishes at home, too.

The manufacturers of this product, Durkee's Famous Foods of Elmhurst, L. I., N. Y., have made certain that the flavor is sealed in safely with Crown Screw Caps.

Only Crown Screw Caps have the patented Deep Hook Thread which seals tighter with a given application force. They alone grip under the glass thread. Crown Cork & Seal Company, Baltimore 3, Maryland. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Never Underestimate The Power of the Package

Of 5 major essentials to the production of a selling package, by far the greatest is *the power to attract!*

Consumer surveys show that 62% to 75% of buying decisions are made at the point-of-sale.

Hence a package that attracts the eyes of passing consumers, that arouses interest, identifies your product, and makes a better impression of quality than competing packages—WINS SALES!

This fact has been generously confirmed in Ritchie's 79 years of producing outstanding, *sales-making* packages for leading national merchandisers.

What
SAKS FIFTH AVENUE
says about Packages

● ***"Saks Fifth Avenue has always considered its packages an important form of Advertising and Promotion. Just as much care is given the selection of design, color, lettering and materials used in our packages, as is given the selection of the fine merchandise which they will contain."***

F. R. JOHNSON
Vice-President

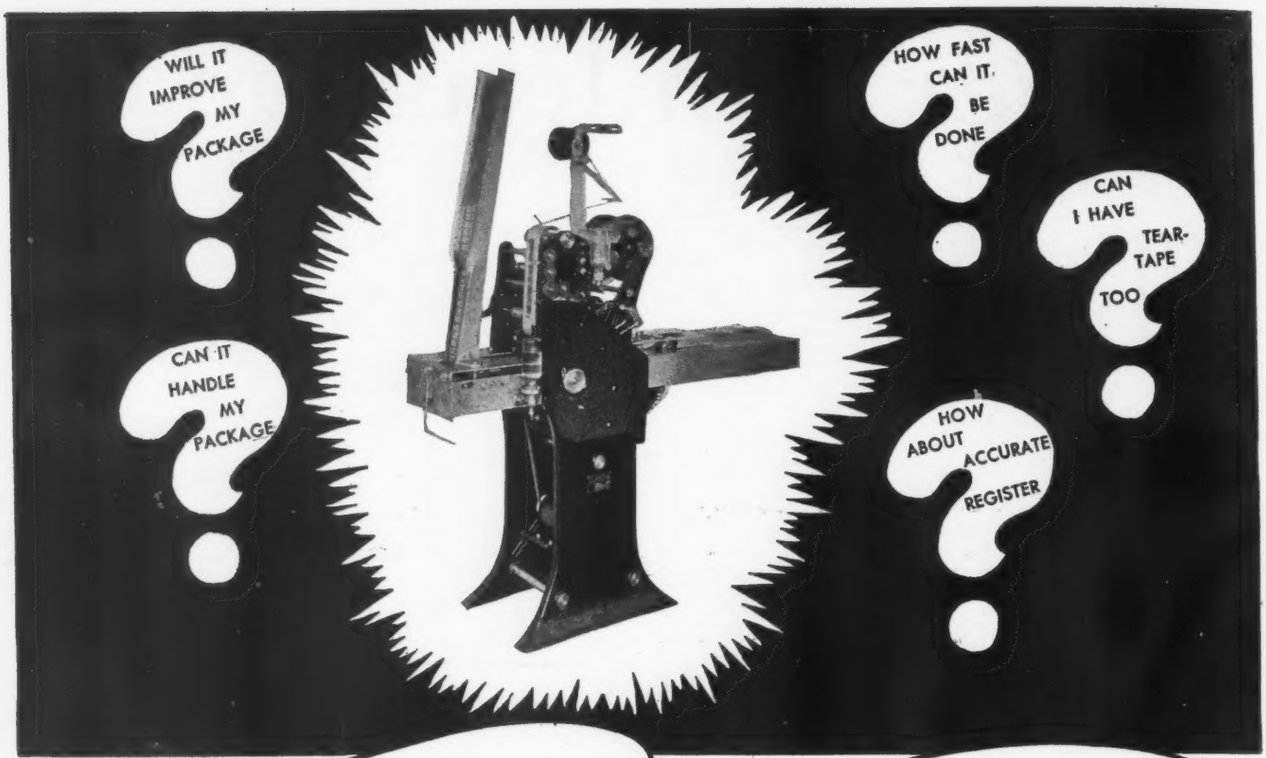
NEVER UNDERESTIMATE THE POWER OF THE PACKAGE

LET US WORK WITH YOU to develop a better package at low unit cost. One that will fully protect and conveniently dispense your product—practical, production-planned—easy to fill or pack—to handle, to stack and display—but above *all* designed for eye-appeal, for quality impression—a selling package.

W. C. Ritchie and COMPANY
8846 Baltimore Avenue • Chicago 17
★ SET-UP PAPER BOXES
★ FIBRE CANS
★ TRANSPARENT PACKAGES

COPYRIGHT 1946, W. C. RITCHIE & CO.

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS • MILWAUKEE • ATLANTA • NEW ORLEANS • DENVER • PORTLAND • SEATTLE • MIAMI


WILL IT IMPROVE MY PACKAGE
HOW FAST CAN IT BE DONE
CAN I HAVE TEAR-TAPE TOO
CAN IT HANDLE MY PACKAGE
HOW ABOUT ACCURATE REGISTER

Get ALL *the answers and you'll want* Scandia

up to 250 per min.

FOR FAST, FOOLPROOF, ECONOMICAL

Cellophane Wrapping

There are many angles to consider when you plan on the *added* protection of moisture-proof wrapping...

And it pays to get all the answers to ALL the questions. SPEED is essential to economical wrapping,—and *Scandia* units are widely known for speed. They are also known for simplicity of mechanism, ease of operation, accuracy, and for the many years of quiet, *satisfying* usefulness.

See a Scandia work. There are models designed for many types and shapes of packaging. There's one YOU will want in *your* plant.

Want further details?

Scandia MANUFACTURING CO.

NORTH ARLINGTON NEW JERSEY

HERE'S WHY PLASTICS-MINDED PACKAGE DESIGNERS START with DUREZ

Over and above all others is one quality which the package designer requires in a plastic material. This is versatility. Because the phenolics are the most versatile of all plastics, he usually starts here when looking for the plastic that fits his job.

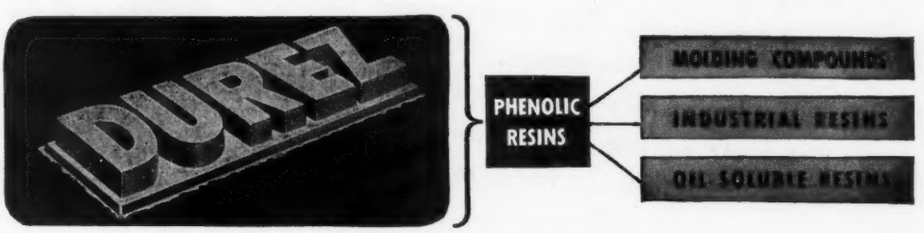
Non-bleeding, for example, is a "must" property when it comes to closures—one reason why more closures have been molded of Durez phenolics than of any other plastic material.

Then there is diversity of finishes—an important property for decorative containers. Again Durez phenolics meet the test. Various effects are easily achieved.

Excellent moldability, of course, is highly desirable too. Here again Durez "fills the bill" by being readily formable to unusual design.

In addition, the more than 300 Durez phenolic molding compounds possess, in varying degrees, such properties as heat resistance, impact strength, dielectric strength, and resistance to acids and alkalies—all invaluable to the imaginative designer.

Perhaps you have a plastic material problem. If so, the benefits which Durez' twenty-six years experience as specialists in the production of the phenolics can bring you and your custom molder, are available for the asking. Durez Plastics & Chemicals, Inc., 257 Walck Rd., N. Tonawanda, N. Y.



PLASTICS THAT FIT THE JOB

Created by *Sefton* for PLOUGH, Inc.!

Not one . . . two . . . or three, but four cans in this "family group" designed by Sefton for Plough, Inc.! They provide protection for a quality product . . . Mexsana, medicated powder . . . in four popular sizes. The convenient turn-tops assure easy reclosure. You, too, should have a family group of cans for your product! Sefton Fibre Can Co. will create them for you . . . look to Sefton today!

Sefton FIBRE CAN COMPANY

ST. LOUIS . . . . . NEW ORLEANS

DISTRICT OFFICES: • Los Angeles • San Francisco • Denver • Tampa • Chicago • Des Moines • New Orleans • Boston • Detroit • Kansas City • St. Paul Omaha • New York • Cincinnatti • Cleveland • Oklahoma City • Pittsburgh • Memphis • Nashville • Dallas • Houston • Salt Lake City • Seattle

match book simplicity . . .

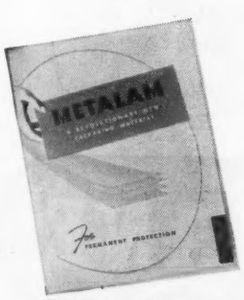
metal-clad safety!

Another "thirsty" product goes to "METALAM"

● Here's what careful planning did for Kodak's new MQ photographic developer package, utilizing Dobeckmun-created "Metalam" heat-sealing aluminum foil laminations:

- Complete protection . . . more utility
- Better display . . . self service
- Reduced weight . . . reduced cost
- Increased dealer and consumer good will
- Fast, automatic filling and sealing

"Metalam" may be the answer to your packaging problem, too. Or, it may be "Tritect" laminated cellophane, printed or plain cellophane bags or machine applied overwraps. Consult us, without obligation.
The Dobeckmun Company, Cleveland 1, Ohio.



"HOW-TO-DO-IT" BOOK

Write today for this illustrated booklet which fully describes the packaging magic of "METALAM" and offers suggestions on how it may solve your packaging problems.

DOBECKMUN

→ Self-selling packages in processed films or foils ←

Branches in Boston, Chicago, Cincinnati, Los Angeles, New York, Philadelphia, San Francisco and Seattle.
Representatives everywhere.

It's SYLVANIA* for Cellophane!

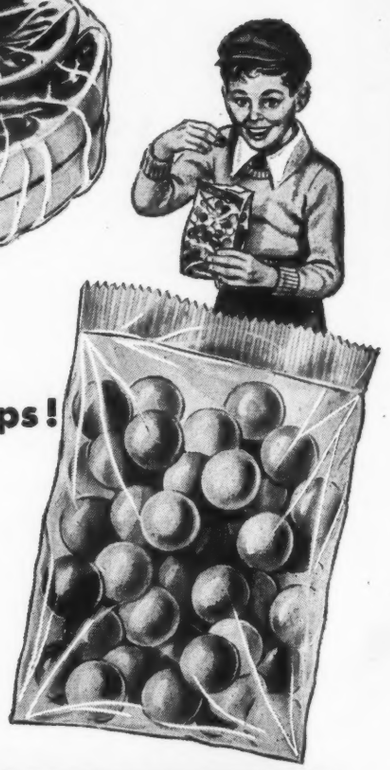
to protect cookies

and chops

Versatile Sylvania Cellophane protects all three—and many more! This shimmering wrap combines beauty with outstanding functional qualities. It protects against air, dust and moisture . . . seals flavor and freshness in.

Sylvania Cellophane today looks and protects better than ever before. Soon even larger quantities of this indispensable packaging material will be available for every requirement.

and lemon drops!



SYLVANIA CELLOPHANE

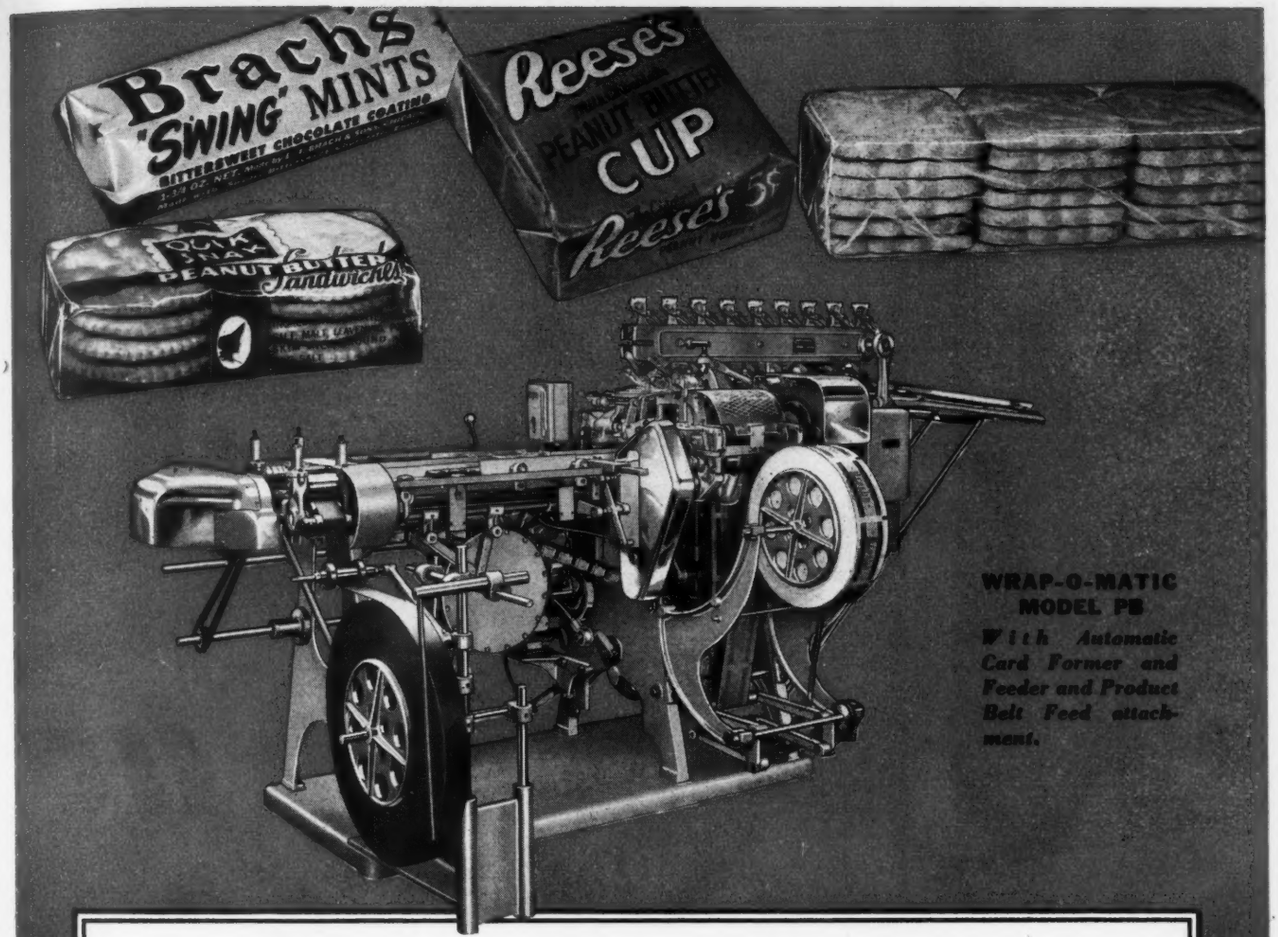
Made only by SYLVANIA INDUSTRIAL Corporation

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd St., New York 17, N.Y. ★ *Plant and Principal Office:* Fredericksburg, Va.

SYLVANIA CELLOPHANE

*Reg. Trade Mark



WRAP-O-MATIC MODEL PB

With Automatic Card Former and Feeder and Product Belt Feed attachment.

Now WRAP-O-MATIC *offers*

3 New Wrapping Economy Features . . .

- **Automatic Card or Boat Former and Feeder**
- **Automatic Product Belt Feed**
- **Multiple Stack Magazine Feeders**

Wrap-O-Matic, designed and built to give high speed wrapping of fragile and irregular shaped candy bars, biscuits and cookies, now offers 3 new additional features that provide still greater wrapping production economies.

1. **Automatic card or boat former and feeder —uses rolled stock material—boats and cards formed and cut to desired length—assures positive feed and reduces operating costs.**

2. **Automatic product belt feed for P.B.—enables operator to feed machine via continuously moving belt which transfers product to intake pockets—reduces product handling—simplifies feeding operation.**

3. **Multiple stack magazine feeder for Model P.B.—permits operator to feed machine through magazines—which transfer product to intake pockets—increases operating efficiency—simplifies feeding operation.**

Take advantage of these latest Wrap-O-Matic wrapping economy features. Write today for new Wrap-O-Matic folder and more complete details.

Lynch Package Machinery Corporation

TOLEDO 1, OHIO, U. S. A.

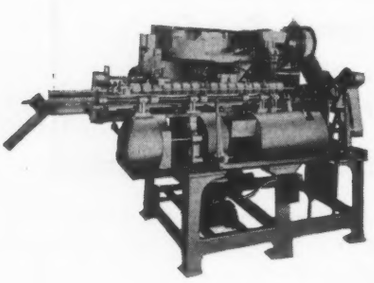
US

Manufactures Machines For

NET WEIGHING
GROSS WEIGHING
PACKING
PACKAGE FORMING & FILLING
CARTONING
CARTON SEALING
CARTON LINING
CARTON WRAPPING
PAPER BOX FORMING
PAPER BOX COLLAPSING

. . . they chose US

THE MODEL C-10 CARTONING, LINING, FILLING and CLOSING MACHINE



Cough drop manufacturers who chose **U S** to solve their packaging problem received the attractive results shown above. The Model C-10 Automatic efficiently and quickly cartons cough drops or hard candies. In a continuous automatic cycle, box-bottoms are closed, wax liners cut from a roll, formed and inserted, then a given number of pieces are dropped into the carton. The final action is to close the liner and tuck in top flaps. Filled cartons are discharged at a rate of 60 per minute. In packaging candies where a protective liner is not required, the liner unit may be omitted from the machine. When candies are very small, or irregularly sized, the C-10 is equipped to volume fill, rather than count.

The Model C-10 has proved to be the ideal machine for cartoning cough drops and candies. Perhaps your packaging problem is different—whatever it is, it will pay you to send it to **U S** for an economical speedy solution.

Send U.S. details on your packaging problems—we have the machines and engineering background to solve them.

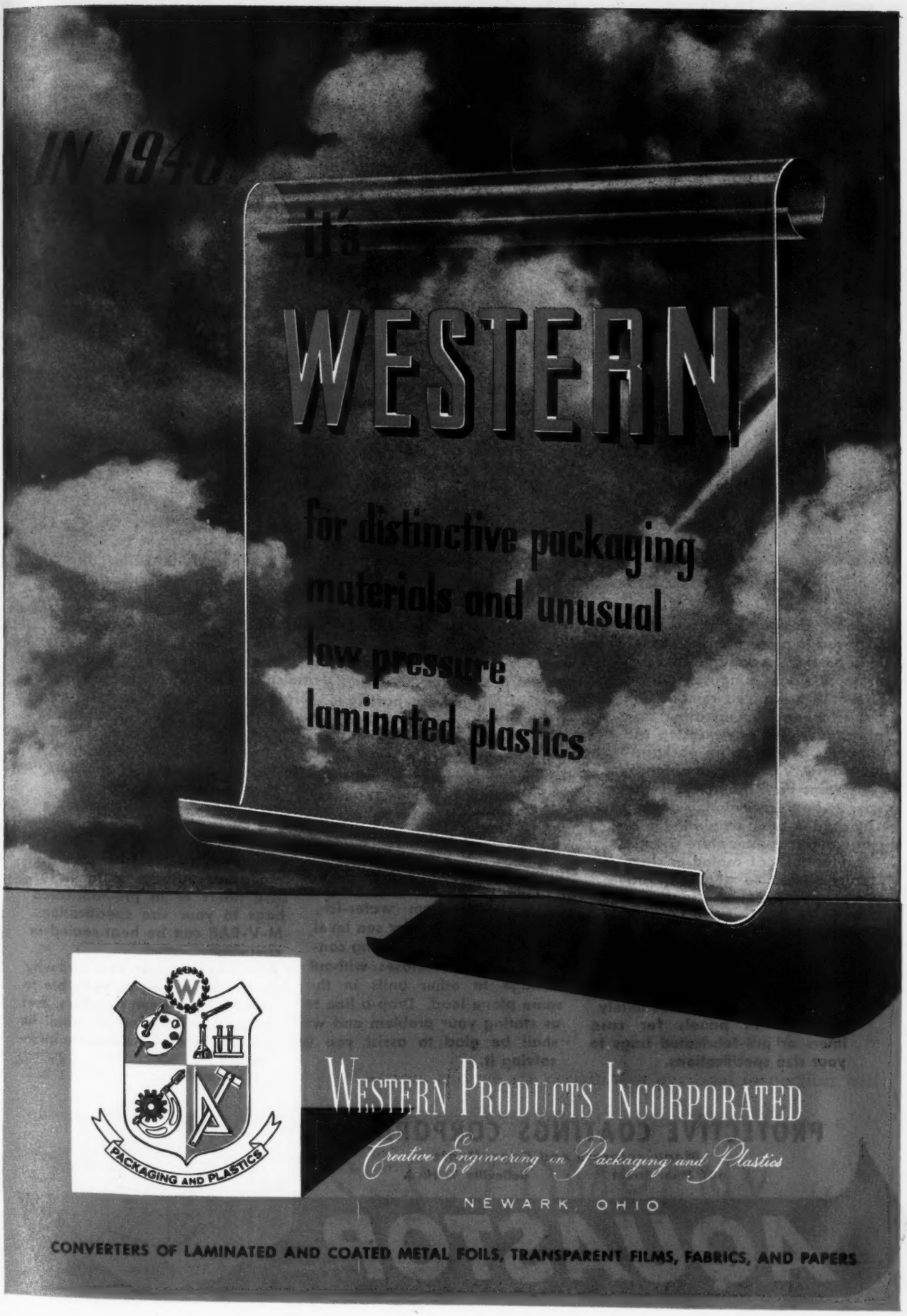
US Automatic Box Machinery Co. Inc.

Owning and Operating

NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

18 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: NEW YORK CLEVELAND CHICAGO
LOS ANGELES (KRUGH EQUIPMENT & SUPPLY CO.)


IN 1946
it's
WESTERN
for distinctive packaging materials and unusual low pressure laminated plastics
PACKAGING AND PLASTICS
WESTERN PRODUCTS INCORPORATED
Creative Engineering in Packaging and Plastics
NEWARK OHIO
CONVERTERS OF LAMINATED AND COATED METAL FOILS, TRANSPARENT FILMS, FABRICS, AND PAPERS

Strange things are happening in "PACKAGE LAND"

Yes, though far removed from the acts that tickled a boyhood fancy, strange things are happening behind closed doors to produce better packaging materials for you.

Research has provided definite answers to some of the most puzzling problems of packaging, and the three products described here are outstanding examples of this progress.

AQUASTOP MP*

Originally designed and successfully used to protect finished machine parts from damage by corrosion, mold or fungus, AQUASTOP MP has given remarkable results when used in other applications. Use of Aquastop MP provides a "breathing package" with an MVT rate of as high as 10 grams per 100 square inches per 24 hours, preventing damage by condensation within the package due to temperature changes. It may be heat sealed or chemically sealed to give a positive waterproof seal as strong as the material itself. Aquastop MP is strong, resilient, scuff-proof, does not flow, crack, become tacky or lose flexibility over the range from —20°F. to 170°F., and remains waterproof indefinitely. Furnished in panels for case liners or pre-fabricated bags to your size specifications.

AQUASTOP FP*

Aquastop FP, while possessing qualities similar to Aquastop MP, is especially processed to provide a material that is non-toxic and odorless. Designed for packaging perishable products such as fresh fruits and vegetables, fish and other seafood, certain chemicals, and many other products shipped in bulk by air or ground transportation. It may be used as heat sealed bags or as case liners for wire bound boxes or crates. Permeable to "dry ice" gas emanations, but impermeable to water from water-ice, Aquastop FP is safe for sea level or altitude flying, protecting contents which it encloses without damage to other units in the same plane load. Drop a line to us stating your problem and we shall be glad to assist you in solving it.

M-V-BAR*

M-V-BAR is similar to Aquastop MP and FP in construction, but is essentially designed as a positive moisture vapor barrier possessing high strength and resistance under conditions of high relative humidity. M-V-BAR is designed for use under those conditions where rigid control of moisture or moisture content is of primary importance. M-V-BAR is finding wide acceptance in the packaging of certain chemicals, explosives and special papers. This material is furnished in panels for case liners or in pre-fabricated bags to your size specifications. M-V-BAR can be heat sealed or chemically sealed.

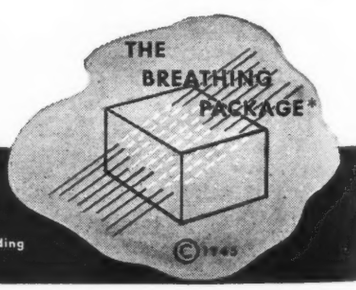
Ask us to show you how and why M-V-BAR can be as valuable to you as it has been to others. Just drop us a line and we shall be glad to send you complete information.

*Trademark Reg. U.S. Pat. Off.

PROTECTIVE COATINGS CORPORATION

Manufacturers and Consultants

681 Main Street • Belleville 9, N. J.



AQUASTOP *Pat. Pending

Jars or Bottles Are *Always Moving* When Cartoned by this Jones Cartoner

Here's how a Jones Constant Motion Cartoner operates—as illustrated in a Jones machine recently installed by the Chesebrough Manufacturing Co. for their Vaseline.

1 Jars, received from labelling machine, are moving constantly.

2 Jars separated and *gradually* transferred to individual buckets by star wheel. Should jar arrive lying down, the cartoner *automatically* stops. No chance to break bottle or damage machine. Once jar enters star wheel, it is transferred positively, without dependence on gravity or friction.

3 Jars are *gradually* laid horizontal in buckets.

4 FP loader *gradually* inserts jars and leaflets in cartons. Should oversize load resist entering carton, the machine automatically stops and loading arm swings back so that defective piece can easily be removed.

Handling bottles in this fashion eliminates the clash-bang of intermittent action. This high-speed cartoner is virtually noiseless and trouble-free in operation. Breakage and stoppage are reduced almost to the vanishing point, even at speeds of 180 a minute or more.

Let us show you a Jones Cartoner in action, and we are certain that personal inspection will quickly convince you of the definite superiority of the Jones Constant Motion Cartoner.

R. A. JONES & COMPANY, INC.

P. O. Box 485 CINCINNATI, OHIO

THE MAJORITY OF AMERICA'S CARTONED PRODUCTS ARE JONES CARTONED

Meet an 18½ inch HIGH PRESSURE *Salesman*

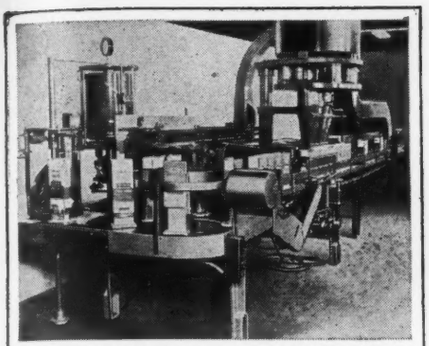
Dealers love B & P displays like this one because it does its own selling.

Graphically illustrating the products many uses, compact, selfdispensing, eye catching, it does everything but make change.

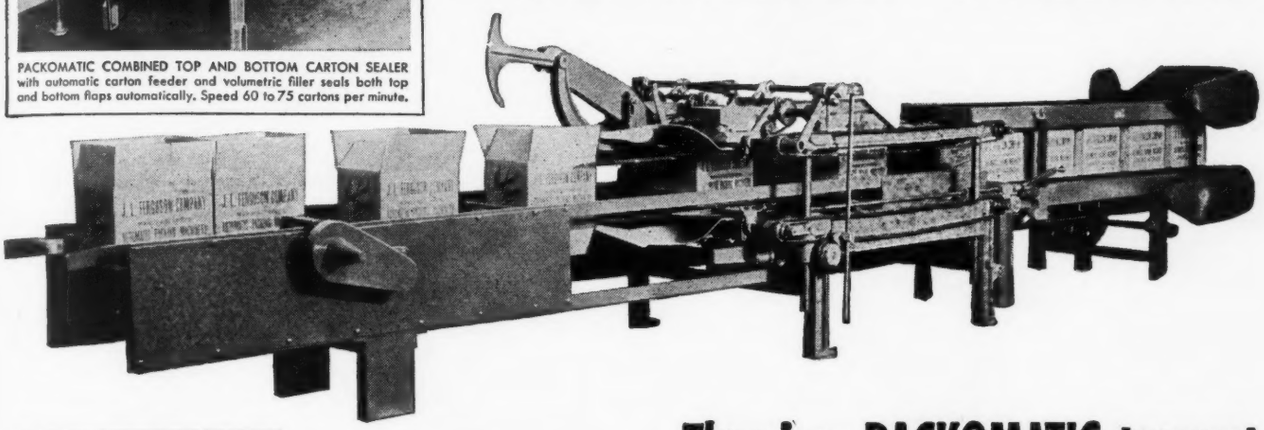
BROOKS & PORTER INC.
304 HUDSON ST. • NEW YORK

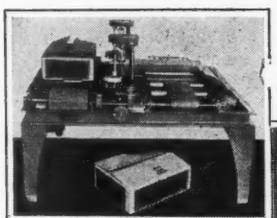
Packaging and display specialists for half a century

PACKAGE FILLING *to* CONTAINER SEALING



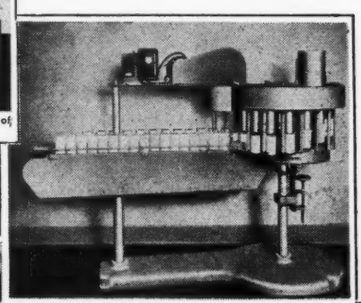
PACKOMATIC COMBINED TOP AND BOTTOM CARTON SEALER with automatic carton feeder and volumetric filler seals both top and bottom flaps automatically. Speed 60 to 75 cartons per minute.



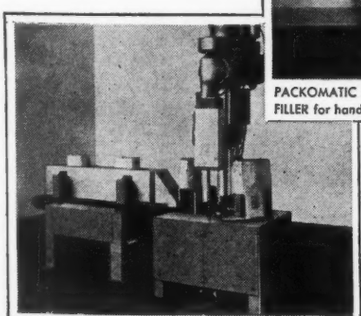


PACKOMATIC CASE IMPRINTER prints both ends of the case simultaneously, up to 20 per minute.

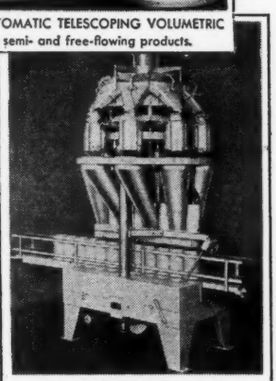
PACKOMATIC'S MODEL "D" CASE SEALER for paper shipping cartons. Seals tops and bottoms simultaneously—or tops, or bottoms only, if desired.



PACKOMATIC AUTOMATIC TELESCOPING VOLUMETRIC FILLER for handling semi- and free-flowing products.



PACKOMATIC'S AUTOMATIC AUGER PACKER—WEIGHER for semi- or non-free flowing products.



AUTOMATIC NET WEIGHT SCALE for metal & round paper cans, glass jars & rectangular containers.

There's a PACKOMATIC *to meet* YOUR *need!*

You'll find enthusiastic *performance reports* from the nation's foremost enterprises on PACKOMATIC packaging machines—from package forming and filling to shipping case sealing.

In fact, PACKOMATIC'S *new* Model "D" Shipping Case Sealer is a model of performance—50 to 3,000 cases per hour as required—squared, glued, sealed and ready for shipment or storage—quickly, efficiently, economically.

Then there's PACKOMATIC'S Combined Top and Bottom Carton Sealer with Automatic Feeder and Volumetric Filler. Seals both top and bottom flaps automatically, and operates at speeds up to 60 to 75 cartons per minute... Available in units to fill packages measured in ounces or pounds.

There's a wide range of PACKOMATIC packaging equipment...a wide scope of PACKOMATIC know-how.

Metropolitan Classified Telephone Directories give location of nearest PACKOMATIC office...or write Joliet.

Coupon below brings you colorful literature on PACKOMATIC Case Sealers, PACKOMATIC Carton filling and sealing machines, PACKOMATIC weighing equipment, etc. No obligation whatever for recommendations and suggestions.

PACKOMATIC

PACKAGING MACHINERY

J.L. FERGUSON CO. JOLIET, ILL.

Chicago • New York • Boston • Philadelphia • Baltimore • Cleveland
Denver • San Francisco • Los Angeles • Seattle • Portland • Tampa • Dallas

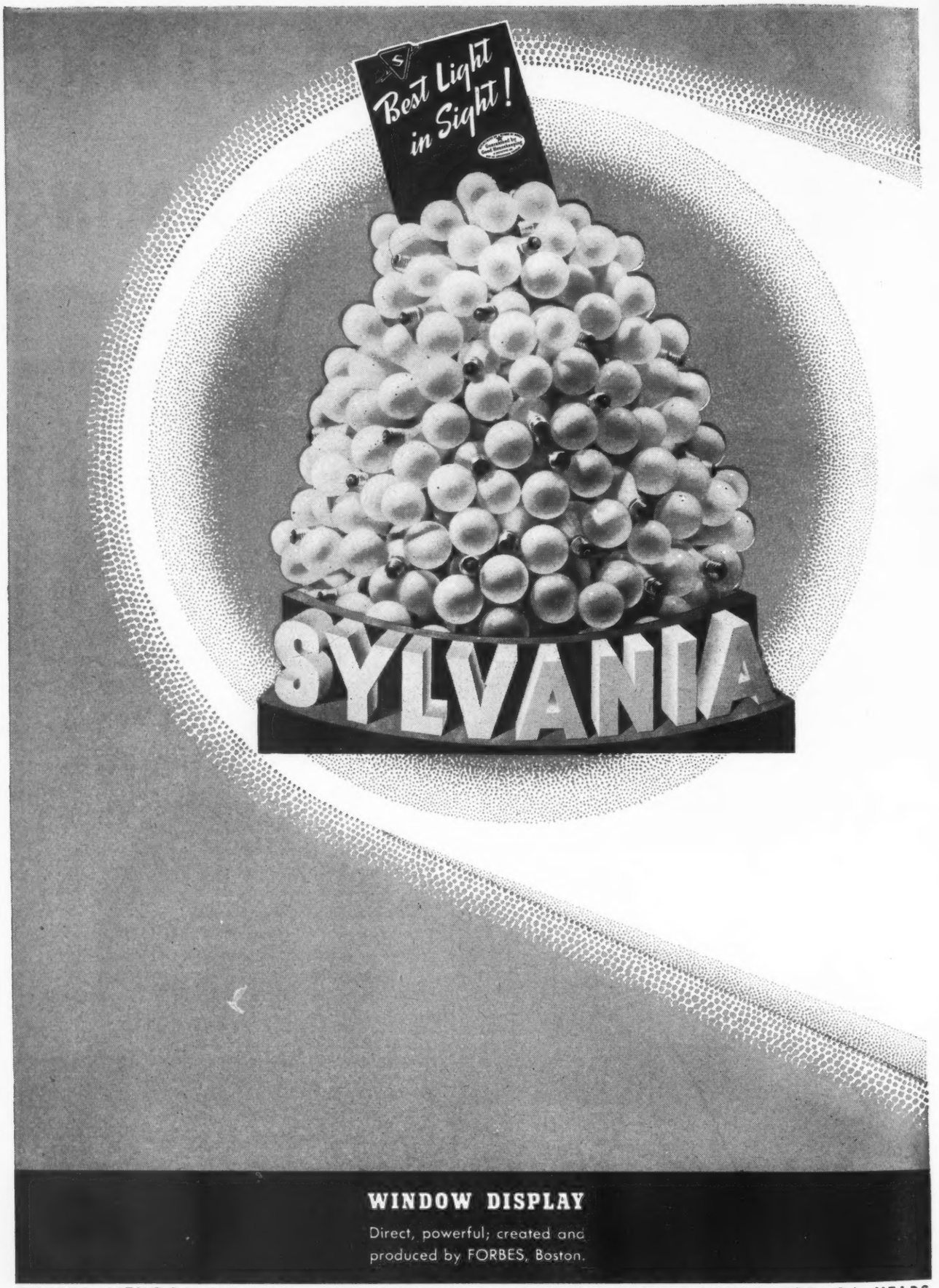
J. L. FERGUSON CO.
Joliet, Illinois Dept. MP-C7

Please send complete data on ☐ Case Sealing ☐ Carton Filling and Sealing ☐ Package Weighing Equipment.

Company_____

Address_____

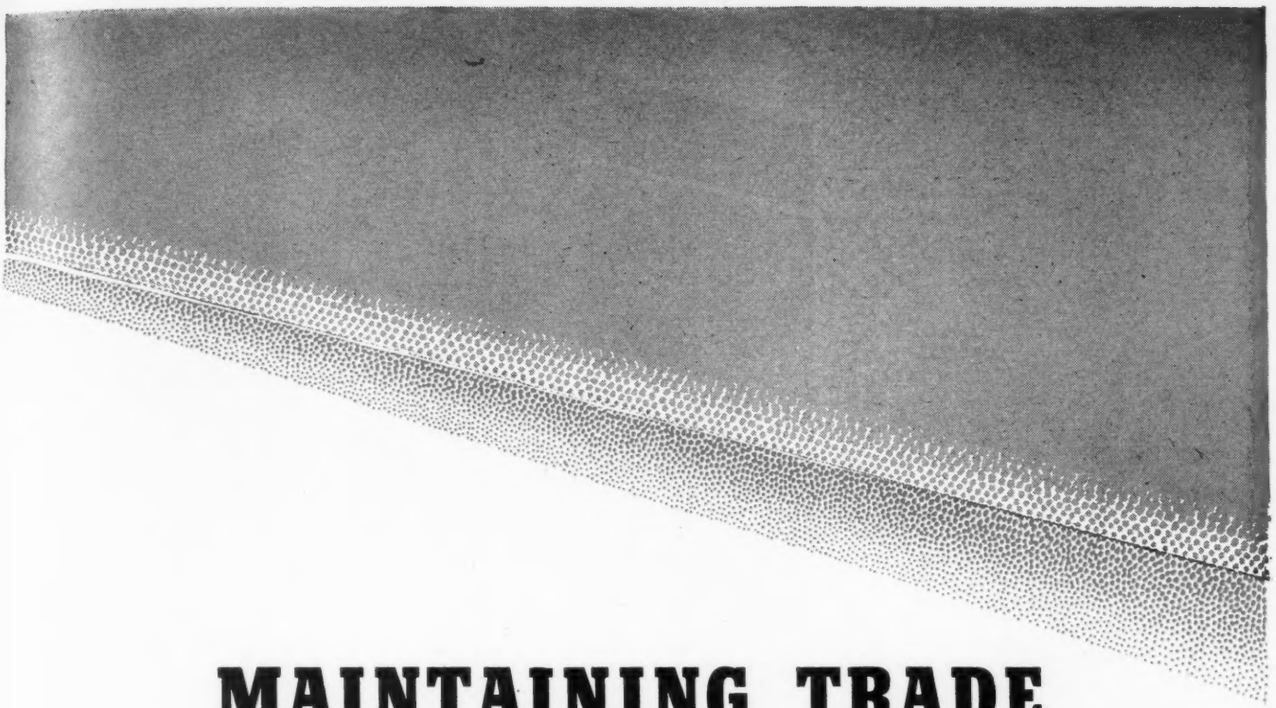
City_____ State_____



WINDOW DISPLAY

Direct, powerful; created and produced by FORBES, Boston.

FORBES LITHOGRAPHY HAS BEEN VITALIZING AMERICAN TRADE-MARKS FOR 84 YEARS



MAINTAINING TRADE NAME RECOGNITION

Sylvania Electric Products Inc. appreciate the prime importance of maintaining the name SYLVANIA active in the eyes and minds of consumers. They realize, too, that the point of purchase is a vital spot in successful merchandising. This bulb display is but one of many display pieces Forbes has been privileged to create and produce for SYLVANIA—for both their Lighting and Radio Divisions—to flash the name SYLVANIA to shoppers right where the urge to buy can be satisfied instantly . . . on Window Displays, Counter Displays and Floor Stands. Let us help YOU vitalize YOUR trade name—in the stores, where products are available for planned and impulse purchases; and in the homes, where they are used.

FORBES LITHOGRAPH CO.

NEW YORK CLEVELAND CHICAGO ROCHESTER

P. O. Box 513 Boston 2

give your "deal" eye appeal with VUEPAK

"Let me see what I get . . ."

That's the customer's question when offered a "deal" . . . or any assembly of merchandise that builds up sales totals.

You can make sure your special offers, introductory deals or companion selling events will have the proper appeal by showcasing them in Vuepak. In a package of transparent, rigid, sparkling Vuepak all the advantages of the "deal" . . . the number of items, their beauty, freshness, color, design, etc. . . . are *revealed AND protected.*

Also: Retailers like Vuepak'd "deals" better because they display better, they're protected against handling, missing items, shopwear, and dust; they don't depend upon clerk's to explain, they accelerate turnover and build up volume.

If you're planning any combination offers . . . don't overlook the importance of giving the customers a good look . . . via Vuepak. (Don't overlook either the attractive re-use value of VUEPAK packages.) Details from your box supplier, or direct from: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts.

Questions and Answers on Vuepak

1. What is Vuepak?

Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.

2. In what form is Vuepak available?

In sheets up to 30″ wide, and in continuous rolls 30″ wide up to 1000 ft. long, in thicknesses up to .015″. Available in .020″ thickness in rolls with unit finish or in 20″ x 50″ press polished sheets.

3. In what thicknesses is it ordinarily available?

In six standard gauges 0.005″ to 0.020″.

4. Does sunlight affect it?

No.

5. Is it affected by heat?

Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."

6. How can it be fabricated?

It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

VUEPAK: Reg. U. S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY . . . WHICH SERVES MANKIND

VUEPAK
TRANSPARENT PACKAGING MATERIAL
TRADE MARK

Near Crisis at Oxford Paper Company by Tony Barlow

MAKING high quality paper calls for unusual skill and constant care—particularly when you are producing it at the rate of over 1,000 miles a day. Oxford has been doing this for years—and on a versatile line of over 100 different papers.

Despite the "know-how" of our veteran craftsmen—some in the third generation at Oxford—samples from every paper run get constant laboratory tests to make sure that each holds to Oxford's high standards.

Papers are tested for flatness, curl, surface bond, and good printing properties. These laboratory tests are supplemented by Oxford's progressive research, which constantly finds ways of making paper better and better.

Fortunately, Oxford can maintain its high quality standards because its facilities are *complete*. It exercises direct control every step of the way from wood to finished paper. Think of Oxford whenever *you* need quality printing papers.

Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED—Polar Superfine, Maineflex, Mainefold, White Seal and Rumford Litho C1S; UNCOATED—Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine and West Carrollton, Ohio — *WESTERN SALES OFFICE: 35 East Wacker Drive, Chicago 1, Ill.* — *DISTRIBUTORS in 48 Key Cities*

"There's Our Answer... The Acetate Set-Up Box!..."

"... and you can see from that U.S.E. Analyzer Chart that it fills the bill for us. I've gone over the check list and analyzed our needs for a package giving protection from dust, air, moisture and handling — and that's the answer. Besides, the clear acetate box gives us the sales display value and transparency we want ... Now, shall I call Kellogg?"

• • • • •

Here's a practical application of the U.S.E. Packaging Check Sheet to a specific product. In a few minutes' time the requirements in terms of basic product qualities are checked against wanted package features and the groundwork is laid for a specific container recommendation. From then on you can talk intelligently and "right to the point" with the U.S.E. Container Engineers.

Whatever your packaging problems, you will get a head start on their solution by sending today for the U.S.E. Packaging Check Sheet. We'll send it to you in the U.S.E. Envelope Analyzer Kit, which also contains check sheets on Mailing and Business Systems. It's handy — it's free — it's good business!

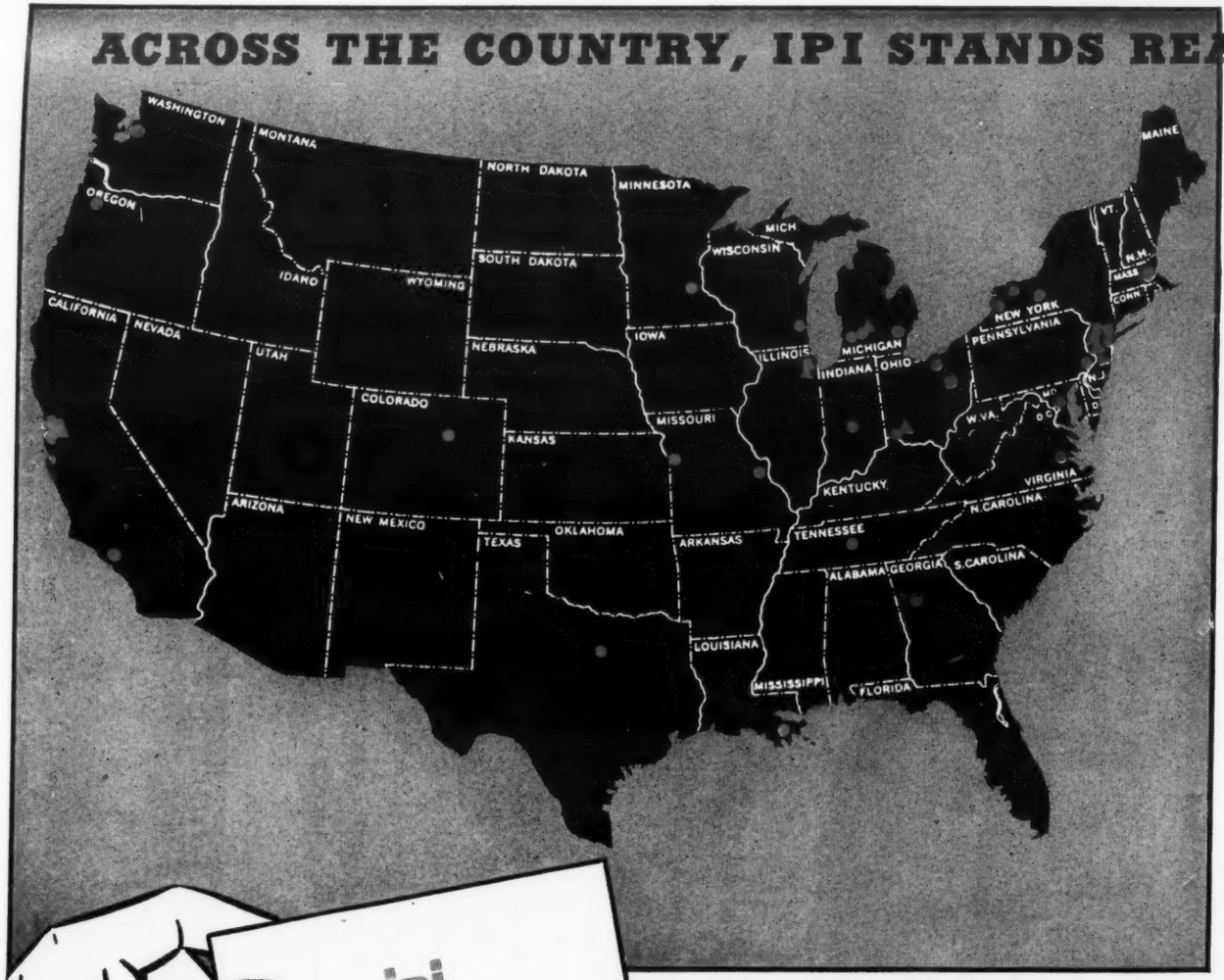
P-15T

UNITED STATES ENVELOPE COMPANY
14 Divisions from Coast to Coast

U·S·E PROTECTIVE PACKAGING

K KELLOGG CONTAINER DIVISION SPRINGFIELD MASS.

ACROSS THE COUNTRY, IPI STANDS READY TO SERVE YOU



The most complete, nation-wide ink and color service is provided by International Printing Ink Division of Interchemical Corporation. Its extensive organization assures you of prompt and reliable service wherever you may be located. For prompt service on ink and colors, call or write the IPI branch nearest to you. Customers say, "It pays to keep in touch with IPI." International Printing Ink Division of Interchemical Corporation, 350 Fifth Avenue, New York 1, N. Y.

So that you will know where to find us in a hurry, here is a list showing the location, address, and telephone number of IPI's branches and factories.

● THESE ARE OUR BRANCHES

Atlanta 3, Georgia
215 Central Avenue
TEL. WALNUT 8265

Baltimore 2, Maryland
720 E. Pratt Street
TEL. CALVERT 5720

Battle Creek 101, Michigan
Merrill Park, P. O. Box 199
TEL. BATTLE CREEK 8177

Buffalo 5, New York
559 Ellicott Street
TEL. CLEVELAND 8240

Cambridge 39, Mass.
175 Albany Street
TEL. ELLIOT 1720

Chicago 5, Illinois
161 W. Harrison Street
TEL. WABASH 3113

Chicago 32, Illinois
(Aniline Department)
3030 West 51st Street
TEL. REPUBLIC 7400

Cincinnati 2, Ohio
417 East 7th Street
TEL. PARKWAY 4700

Cleveland 14, Ohio
113 St. Clair Avenue, N. E.
TEL. MAIN 6828

Dallas 1, Texas
1907 Commerce Street
TEL. RIVERSIDE 6874

Denver 2, Colorado*
1824 Curtis Street
TEL. MAIN 5882

Detroit 26, Michigan
222 W. Larned Street
TEL. RANDOLPH 7818

Indianapolis, Indiana
110 East 9th Street
TEL. RILEY 3458

Kalamazoo 3, Michigan
315 E. Michigan Avenue
TEL. KALAMAZOO 6416

Kansas City 6, Missouri
707 Central Street
TEL. VICTOR 2707

Los Angeles 15, California*
1220 Maple Avenue
TEL. PROSPECT 4496

Milwaukee 2, Wisconsin
431 N. Milwaukee Street
TEL. DALY 2138

Minneapolis 15, Minnesota
729 South 4th Street
TEL. GENEVA 3639

Nashville 3, Tennessee
417 Commerce Street
TEL. NASHVILLE 6-7871

New Orleans 13, Louisiana
711-13 St. Charles Street
TEL. RAYMOND 3971

New York 19, New York
636 Eleventh Avenue
TEL. CIRCLE 6-7900

Philadelphia 23, Pa.
1061 Germantown Avenue
TEL. MARKET 2428

Portland 9, Oregon*
537 N. W. 11th Avenue
TEL. BROADWAY 3383

Richmond 3, Virginia
11 N. Governor Street
TEL. RICHMOND 3-5930

Rochester 4, New York
14 Franklin Street
TEL. STONE 4772

St. Louis 3, Missouri
1909 Locust Street
TEL. CENTRAL 3736

San Francisco 3, California*
915 Howard Street
TEL. GARFIELD 2020

Seattle 4, Washington*
212 Maritime Bldg.
TEL. MAIN 3291

Syracuse 2, New York
200 S. Geddes Street
TEL. SYRACUSE 5-9112

Wadsworth, Ohio
141 East Street
TEL. WADSWORTH 88

**The International Printing Ink Corporation Limited (California)*

▲ THESE ARE OUR FACTORIES

Battle Creek 101, Michigan
P. O. Box 199
TEL. BATTLE CREEK 8177

Brooklyn 1, New York
247 Water Street
TEL. TRIANGLE 5-9690

Chicago 14, Illinois
2211 Elston Avenue
TEL. ARMITAGE 2171

Cincinnati 2, Ohio
417 East 7th Street
TEL. PARKWAY 4700

Lodi, New Jersey
(Aniline Department)
Route 17, P. O. Box 158
TEL. HACKENSACK 3-1705

Newark 1, New Jersey
(News Ink)
Doremus Avenue, P. O. Box 58
TEL. MITCHELL 2-2142

New York 1, New York
(Litho Plate Graining)
350 West 31st Street
TEL. PENNSYLVANIA 6-7324

Oakland 7, California*
16th & Willow Streets
TEL. HIGHGATE 6540

**The International Printing Ink Corporation Limited (California)*

FOR THE NEWEST IN INKS AND PRINTING SERVICE . . . "Keep in Touch with IPI"

It has taken countless ages for Nature to evolve the perfect "shipping container" for the walnut. Far longer than you can wait for a solution to your container problems, of course. Folding carton and shipping container manufacturers bring their problems to Hummel-Ross. As specialists, we can frequently give them an immediate solution to their problems. If not, they know that Hummel-Ross has the imagination and skill to originate and create Kraft products for their special needs.

HOPEWELL KRAFT

Originators • Creators

HUMMEL-ROSS FIBRE CORPORATION

Hopewell, Virginia, U. S. A.

Keep your products Delightful, Delicious, Delectable *with Anchor* D *Caps*

Anchor
CONTAINERS AND CAPS

PRODUCTS OF
ANCHOR HOCKING GLASS CORPORATION
LANCASTER, OHIO

Tune in ANCHOR HOCKING'S HOBBY LOBBY
CBS NETWORK . . . THURS. EVE.

Anchor D Cap

FOR a third of a century housewives have been accustomed to buying fruits, vegetables, sea foods, meats, relishes, spreads and many other products sealed with Anchor D Caps. They unconsciously, but instantly, recognize these seals as the symbols of delightful factory-fresh foods; foods that possess all their original delectable flavor and goodness.

Throughout the years Anchor D Caps have won universal confidence through consistent performance. They are still unsurpassed for their tamperproof, leakproof, airtight and vacuum seal dependability . . . and may be used in sterilizing, processing, in hot or cold packing.

Be sure that the delightful, delicious, delectable qualities of the products packaged in your plant are kept intact until consumed. Seal your products with Anchor D Caps.

EASY ON THE EYE...

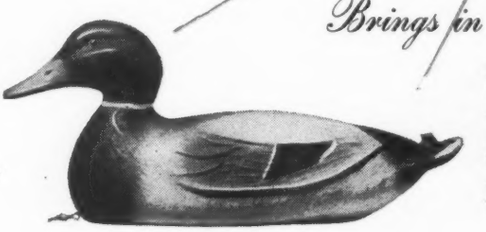
Easy on your budget, too!

Cellulose Plastic Packages

Is your package an appealing "eyeful"? Does it attract sales . . . withstand shocks and transportation hazards? You can dress it up and give it extra strength at low cost with cellulose plastic. The many advantages of cellulose plastic are utilized by us in creating distinctive and dependable products and packages that please both producer and consumer.

This CELLULOSE PLASTIC DECOY

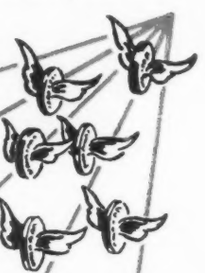
Brings in the Ducks



Duck hunters are enthused about Victor Veri-Lite Decoys manufactured by Animal Trap Company of America. They are lifelike . . . exceptionally light and sturdy . . . absolutely waterproof because they're cellulose plastic.

This CELLULOSE PLASTIC CONTAINER *Brings in the Ducats*

"Timber," a line of men's toiletries by the Maurella Products Co., is appropriately packaged in a cellulose plastic container resembling the bark on a tree.



REMEMBER THESE ADVANTAGES OF CELLULOSE PLASTIC

1. Pliable—Can be molded into any shape
2. Inexpensive
3. Waterproof
4. Resilient—Cushions against shock
5. Extreme Lightness
6. Exceptional Strength

WHAT'S YOUR TASTE IN PACKAGING?

Do you prefer new, exciting designs? Or simple standard patterns? Whatever your preference, we can help you create a package that will make your product more appealing to the customer. Write for complete details.

MOLDED PRODUCTS DIVISION • ANIMAL TRAP COMPANY OF AMERICA • LITITZ, PA.

UNICRAFTS INC.

AMHERST MASSACHUSETTS

EARLY DELIVERIES ON EQUIPMENT!

UNICRAFTS, INC. is proud to announce early deliveries of our "Deluxe" model Rotogravure Tandem Printing Press and other models. This tried and proven press incorporates all the most up-to-date features developed during the war. Delivered in 1 to 6 colors in any width up to 72".

FEATURING

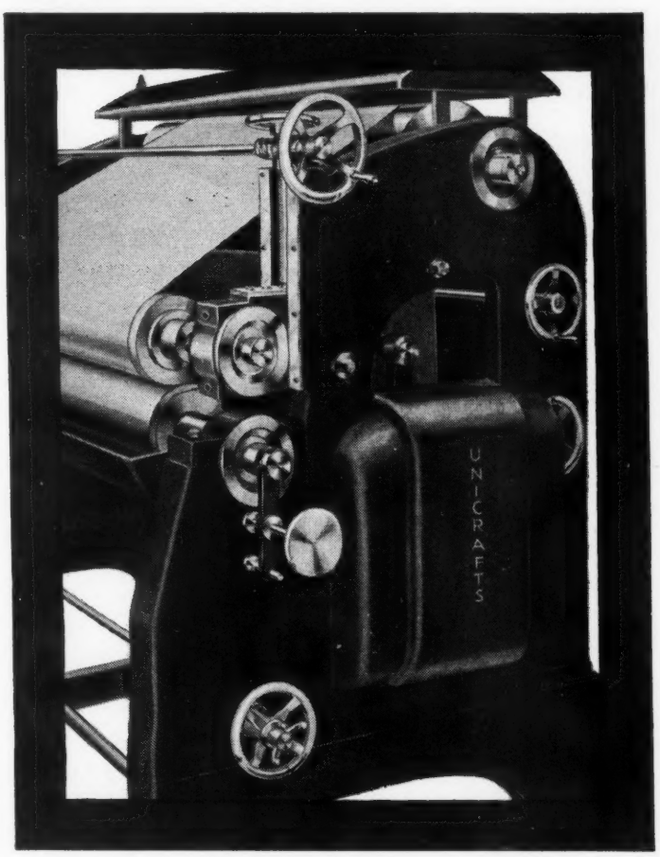
CIRCULATING COLOR PUMPS

LATEST DESIGN DRYING EQUIPMENT

HYDRAULIC CONSTANT TENSION UNWIND

NEW TYPE VARIABLE SLIP BELT REWIND

MANY OTHER ADVANCEMENTS



STRESSING

HIGH SPEED

SIMPLICITY OF OPERATION

ECONOMY

LOW MAINTENANCE THROUGH USE OF ANTI-FRICTION BEARINGS

- Our line includes other models of Gravure Printing Equipment, Laminating and Coating Equipment, Embossing Machines and Special Equipment. We also supply engraved rolls of all types and copper steel or aluminum roll blanks for engraving.
- We are exclusive sales representatives for "Rollcraft" Friction and Super Calenders and Wheeler Paper Rolls for Embossing and Calendering, and Positive Register Rubber Printing Plates.

★

You'll never know what you've been missing

Until you try

American Anode latices and mixes

for coating and impregnating paper...

Many paper chemists and engineers haven't had the chance to learn of the remarkable progress made recently in the field of coating and impregnating paper with latices and water mixes. They haven't had a chance to discover that the use of American Anode latices and mixes in a surprisingly large number of cases will result in a *better* product at a *lower* cost.

That's why we hope you will tell us what you are doing and how you are doing it. Give us the opportunity to work with you on standard products as well as new developments. We think that we can help you in a way that you'll like.

You'll like the inherent safety features of water systems, too; no dangerous, explosive solvents; no cumbersome and expensive recovery systems.

Latices and mixes of natural and synthetic rubbers, GEON, HYCAR, neoprene, and Saran are available from our bulk storage. For more information about the *modern* way to coat and impregnate paper, please write Department AC-7, American Anode, Inc., 60 Cherry Street, Akron, Ohio.

The American Anode laboratory in Akron is equipped with the latest and most modern paper testing equipment, and is staffed with people who know how to use it.

AMERICAN ANODE

INCORPORATED

NATURAL AND SYNTHETIC RUBBER LATICES, WATER CEMENTS AND SUSPENSIONS

Where's the
PONY LABELRITE*
in THIS picture?

Brother, it's the labeling machine behind the scene, in the production line of the plants where fine products are given the *extra* appeal of Fine Labeling. Lotions, salves, creams, drugs and foods of all kinds labeled on the Pony Labelrite have every label in the *correct position,* are *firmly* glued down, and never have excess glue seeping out from label-edges,—they need *no wiping.* These are "built-in" features of the Pony Labelrite.

FINE LABELING IDENTIFIES FINER PRODUCTS

Send for descriptive folder on the Pony Labelrite's exclusive features.

VACUUM LABEL FEED

lifts labels from hopper, holds labels rigidly in position while they pass over glue roller, and registers them perfectly on containers . . .

MEANS PERFECT REGISTER

TWIN-ROLLER GLUE CONTROL

The micro glue control applies a tissue-thin film of adhesive, so that no glue seeps out; no wiping is required . . .

ELIMINATES "WIPING OFF" EXCESS ADHESIVE

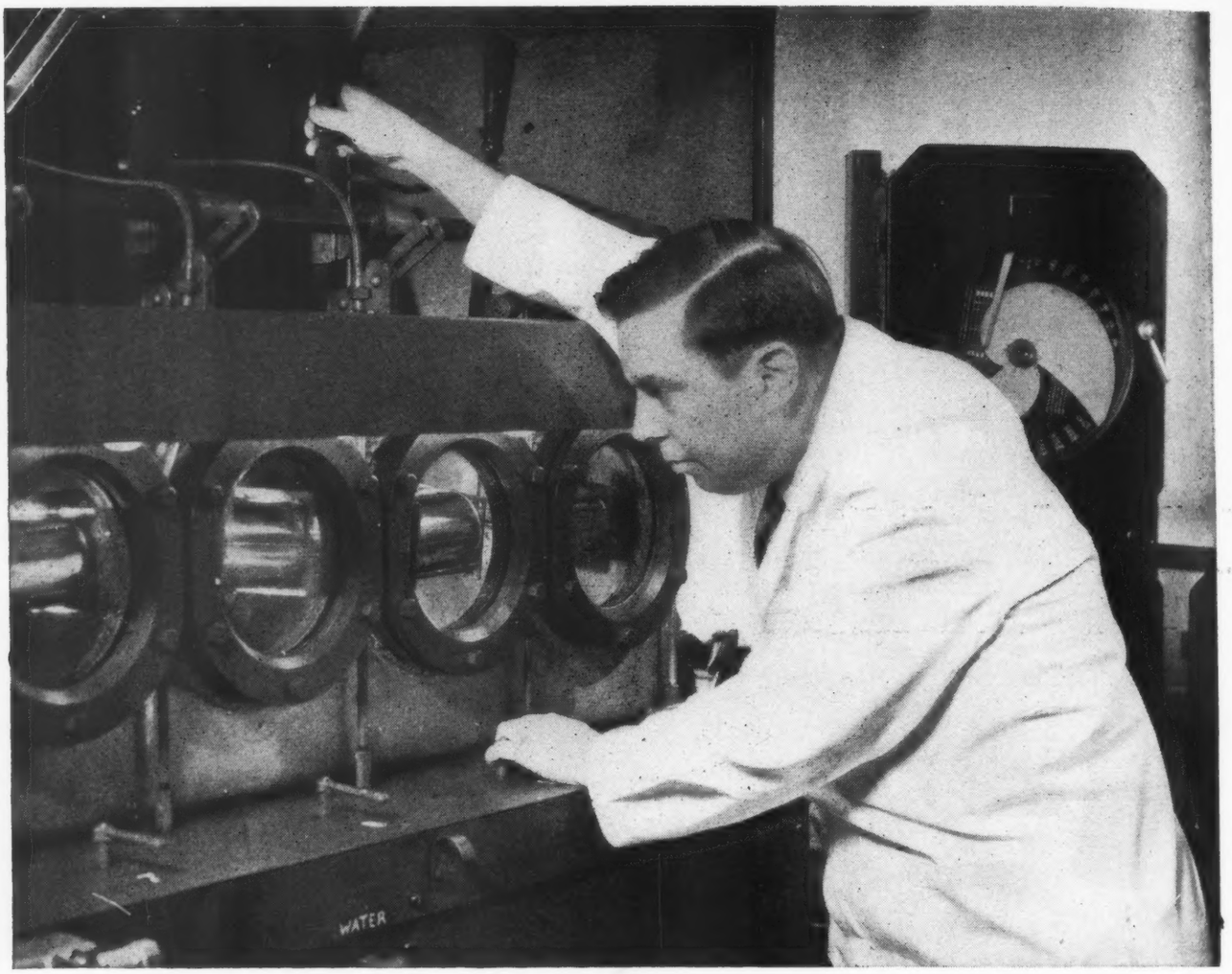
* Registered U. S. Pat. Off.

NEW JERSEY MACHINE
corporation

1510 Willow Ave. HOBOKEN, N. J.

Chicago Office — 325 West Huron St.

Cincinnati Office — 1701 Carew Tower



IT MAKES 'EM "CREEP"

To all appearances the seam on a can may look and behave like a permanent job that will stand up under trying conditions.

But, this visual check is not enough for us. We want to know what type of abuse the can will stand in processing and at what point beyond normal use the seam will let go.

And this is just what the odd-looking machine in the picture will tell us.

High Pressures

It will subject the inside of a can to pressures way beyond what it would meet in actual use.

It will do the same thing for temperatures, too.

It keeps the cans under these stresses until the cans fail.

The machine is called a "pressure tester for determining creep resistance of cans." It is located in the Central Research Laboratory of American Can Company at Maywood, Illinois.

And, as the name implies, this machine can put enough pressure on can seams for a long enough time to displace them slightly, or make them "creep."

Control

Measuring creep resistance is just one phase of American Can's entire quality-control operation.

Solder, enamel, steel, tin, and sealing compounds come in for extensive testing, too.

Why? Because to us the sensible way to serve business, and keep it, is to make sure that our customers get as perfect a can at the millionth unit as at the first.

AMERICAN CAN COMPANY CANCO NEW YORK • CHICAGO • SAN FRANCISCO

No other container protects like the can.

LET US PACKAGE
YOUR PRODUCTS
in Canada for the
CANADIAN MARKET
Ship products in bulk and save on lower custom and freight tariffs.
New containers designed to your specifications.
Every Rowe Package embodies product protection, sales appeal, consumer utility and cost limitation.
Your inquiries invited.
A Complete PACKAGING SERVICE
ROWE
ROWE PACKAGING CO., LIMITED – TORONTO, CANADA

"WINNERS

are notably endowed with

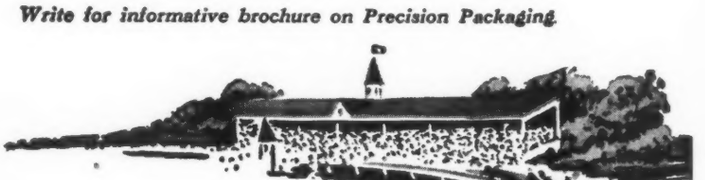
SPEED—PRECISION, AND—PERSONALITY"—

says ROBERT GAIR

Modern types of packaging machinery are endowed with speed, and personality too . . . and each machine demands a "uniform precision" carton . . . just the kind of distinctive "tailor made" cartons that Robert Gair has been creating and producing consistently for over eighty years . . . cartons that are *GAIRanteed*.

From a "selling impulse" viewpoint many of our cartons have joined the parade of constant WINNERS.

Write for informative brochure on Precision Packaging.



GAIR

ROBERT GAIR COMPANY, INC., NEW YORK—TORONTO • PAPERBOARD—FOLDING CARTONS—SHIPPING CONTAINERS

GET THE LOWDOWN ON HYDRY!

New booklet gives you all the information about

—BRILLIANT QUICK-DRYING ODORLESS INK

The news of HYDRY is spreading fast—and no wonder! For here is a *moisture-set* ink that on presses equipped with steam applicators dries and hardens instantly. This new booklet tells you all about this all-important development in package printing . . . shows you simply and directly by text and picture how it eliminates many food, confectionery and tobacco packaging problems.

Developed by Michigan Research Laboratories, subsidiary of Sun Chemical Corporation, HYDRY speeds production. No more waiting days or weeks for ink to dry. Waxing, folding or die-cutting operations can be started as soon as sheets come off the press.

And HYDRY is absolutely odorless—no residual ink odors to affect milk, cheese, butter, shortening, meat, cakes, breads, cereals, ice cream, sugar, flour, chewing gum, candy, tobacco or any one of numerous other products. Prints bright and clean, in a full range of brilliant colors.

Write on your letterhead for this new booklet.

Check your package-printing problems against these HYDRY features

hydry

Fast Drying—Dries on most stocks in 10 to 30 minutes; on presses equipped with steam applicator, dries *instantly!*

Odorless—Finished prints entirely devoid of ink odor.

Brilliant Colors—Ink film reflects light, gives superior brilliance and cleanliness.

Non-Offset—Possibilities of offset reduced to a minimum.

Non-Smear—Dry-hard finish extremely resistant to rubbing and smearing.

Non-Crystallizing—Can be overprinted, even after several weeks.

Sharper Printing—Does not spread or bleed.

Folding Qualities Improved—Affords better moisture content in paper stock.

Improves Heat-Sealing of Waxed Wrappers—Will not mix with wax film during heat-sealing operations.

Sun CHEMICAL CORPORATION

GENERAL PRINTING INK COMPANY DIVISION

Sun Chemical Corporation, 100 Sixth Avenue, New York 13, N. Y.

American Printing Ink • Eagle Printing Ink • Fuchs & Lang • Geo. H. Morrill • Pacific Coast • Sigmund Ullman E. J. Kelly Company • General Printing Ink Corporation of Canada, Ltd.

STANDARD-KNAPP

CASE PACKERS AND CASE SEALERS TOP STANDARD FOR QUALITY IN THE PACKAGING INDUSTRY

IN almost any field of packaging where production is large and steady, from cigarettes to beer to canned meat to household cleanser—you will find Standard-Knapp case packers and case sealers top standard for quality . . . and for low unit packaging cost.

Every engineering detail of every Standard-Knapp machine has been worked out by topflight engineers with years of actual packaging production experience. Every part of every Standard-Knapp machine is produced with precision, made of the best material.

That is why Standard-Knapp equipment runs consistently year in and year out, turning out volume production with a minimum of maintenance, replacement and repair, and consequently low per-package cost.

We also design and manufacture many other types of package machines including can labelers, bottle packers, bag packers and others.

STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING AND CAN LABELING MACHINES
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

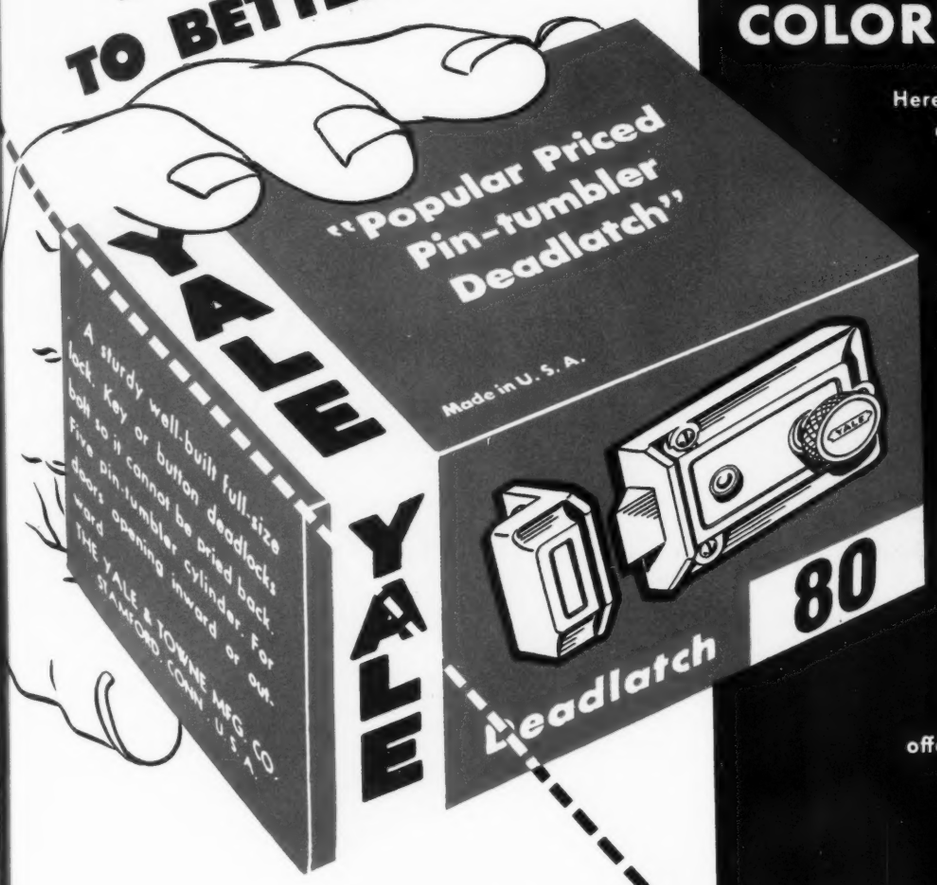
570 Lexington Avenue, NEW YORK 22, N. Y. | 221 North LaSalle St., CHICAGO 1, ILL. | 145 Public Square, CLEVELAND 14, OHIO | 300 Seventh Street, SAN FRANCISCO 3, CALIF.

420 S. San Pedro Street, LOS ANGELES 13, CALIF. | 3224 Western Avenue, SEATTLE 99, WASH. | 1208 S. W. Yamhill Street, PORTLAND 5, OREGON | 349-350 Paul Brown Bldg., ST. LOUIS 1, MO.

Windsor House, Victoria Street, LONDON S.W. 1, ENGLAND

YALE... shows the way TO BETTER HARDWARE MERCHANDISING

WITH THESE COLORFUL NEW BOXES


"Popular Priced Pin-tumbler Deadlatch"
Made in U. S. A.
YALE
A sturdy well-built full-size lock. Key or button deadlocks bolt so it cannot be pried back. Five pin-tumbler cylinder. For doors opening inward or outward.
THE YALE & TOWNE MFG. CO.
STAMFORD, CONN. U.S.A.
YALE
Deadlatch
80

Here they are—new YALE boxes that are guaranteed to increase your sales of lock-sets, night latches, padlocks, door closers, and related products . . . new YALE boxes which will, in addition, make your sales *easier* and *more profitable*.

And these new boxes (which start a new trend in YALE hardware merchandising) did not just *happen!* No, sir . . . they are the result of much intensive research, marketing and boxing studies . . . experiments, tests, comparisons . . . until everyone concerned could say "*Thats' it!*"

EASY TO FOLLOW INSTRUCTIONS IN EVERY NEW YALE BOX

New, scientifically planned installation instructions which, because of their simplicity, help keep the customer sold.

SIMPLEX SERVES THE "LEADERS"

° ° °

YALE RESEARCH HAS CREATED SUPERIOR MERCHANDISING METHODS IN HARDWARE PACKAGING

° ° °

WE ARE PROUD TO PRODUCE THE NEW YALE BOXES

° ° °

SIMPLEX PAPER BOX CORP.
LANCASTER, PA.

THEY H... "RELA...

USE YALE DOOR CL... for Quiet and Comfort

In addition to selling the product it contains, one entire side of each new YALE box is devoted to reminding your customers of other YALE products in your store.

This night latch box for instance also sells door closers.

THE NAME YALE HELPS MAKE THE SALE

NEUTRAGLAS

• • • The Visible Guarantee of Invisible Quality • • •

KIMBLE GLASS COMPANY • • • • VINELAND, N. J.

NEW YORK • CHICAGO • PHILADELPHIA • DETROIT • BOSTON • INDIANAPOLIS • SAN FRANCISCO

Mystery of the Vanishing Vitalis!

What happened, a few years ago, to the Vitalis that was supposed to be in barbers' stand bottles—but wasn't?

Why were sales to barbers falling off when over-all sales of this famous hair preparation were greater than ever?

Faced with these questions, the makers of Vitalis did a little sleuthing. Brought to light the fact that Vitalis bottles were being refilled with substitutes supplied as the real thing.

The plot thickens

Not only were sales being lost, but Vitalis was losing its good name among barbers and their customers.

Something had to be done and we of Sun Tube were called upon to do it. We developed a special, one-shot tube that could neither be re-used nor refilled.

Because it was handy and gave the exact measure, barbers liked it. It guaranteed the genuineness of the product, so customers liked it. And the fact that barber sales *more than doubled* brought no complaints from Vitalis!

Where you fit in

We don't say every packaging problem can be solved so dramatically. (Your product may not be adaptable to the one-shot tube.) We *do* say that our engineers will bring the same ingenuity and resourcefulness to bear on your particular requirements that assured perfect packaging for Vitalis. And for a host of products never before considered prospects for a tube!

Since your product may be among them, why not avail yourself of Sun Tube's information and advice? Just phone or write our nearest representative. Or our main office at 181 Long Avenue, Hillside, N. J.

Sun Tube Corporation

HILLSIDE · NEW JERSEY

CHICAGO 1, ILL.
James L. Coffield, Jr.
360 No. Michigan Avenue

ST. LOUIS 1, MO.
M. P. Yates
Arcade Building

ST. PAUL 1, MINN.
Alexander Seymour
615 Pioneer Building

LOS ANGELES 27, CALIF.
R. G. F. Byington
1260 North Western Ave.

CINCINNATI 8, OHIO
Ralph H. Auch
3449 Custer Road

The Charles S. Welsh Memorial Award for outstanding packaging in 1946 to Chen Yu Cloud Silk

Molded

In highly competitive fields the molded plastics container can give merchandise the extra eye appeal that wins consumer approval. It is a packaging method that offers greatest opportunity for individuality and styling.

The molded container eliminates losses due to breakage in transit, and reduces shipping costs because of its light weight.

Plan the molded container with Lumarith plastic in mind. This tough Celanese plastic offers unlimited color possibilities including crystal clear transparency . . . can be injection molded by the fastest processes . . . molds to satin smoothness . . . is chipproof and easy to wipe clean with a damp cloth.

Sales influence is a quality of all Lumarith plastic packaging materials: transparent film for wraps, bags and laminated boxes . . . sheets for fabricated and formed containers . . . molding materials for esthetic and functional packaging. Celanese Plastics Corporation, a division of Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

*Reg. U. S. Pat. Off.

LUMARITH* *A Celanese Plastic*

Only one-eighth visible!

There are many things the human eye can see only in part . . . and it is difficult to properly judge their values by eye alone.

For example, take one of Riegel's many packaging papers . . . Diafane. The eye can easily see its transparency, weight and general appearance . . . but beneath the surface there can be any number of invisible but carefully created technical qualities—qualities that may be adjusted in manufacture to meet a vast number of packaging needs.

Diafane can be made moistureproof, semi-moistureproof or non-moistureproof. Flexibility can be controlled. Wet strength may be introduced. It can be made to seal with heat or glue, or with glue only. An invisible mold retardant can be introduced in the coating.

Only by outlining your needs and having the necessary qualities built in during manufacture can you be sure of securing the most efficient packaging paper from the combined standpoint of appearance, protection, production efficiency and cost . . . and few companies are as well equipped as Riegel to do this job for you. Only a fraction of the more than 600 special papers in the Riegel sample file can be generally advertised, but they are there waiting for you to do your shopping the one-stop Riegel way. Plan now for the day when these papers will be plentiful again.

600 RIEGEL Papers

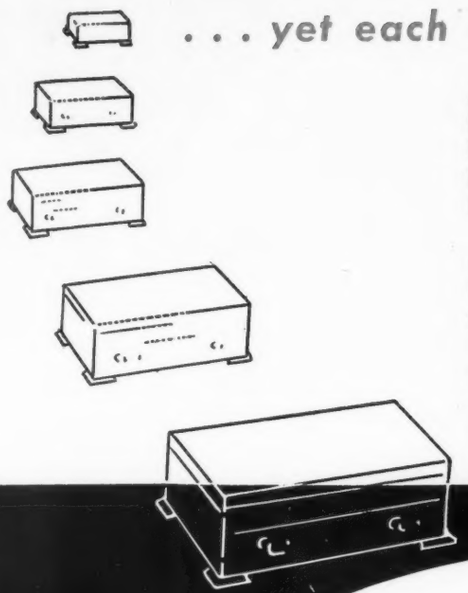
Riegel packaging papers include glassine, greaseproof, sulphite, wet-strength . . . printed, embossed, resin-impregnated, laminated, oiled, lacquer-coated, waxed, dry-waxed . . . as well as printing papers, converting papers and special industrial papers in endless variety.

RIEGEL PAPER CORPORATION • 342 MADISON AVENUE • NEW YORK 17, NEW YORK

10,000 Pilliod Boxes...

NO TWO ALIKE

. . . yet each conforms exactly to specifications!



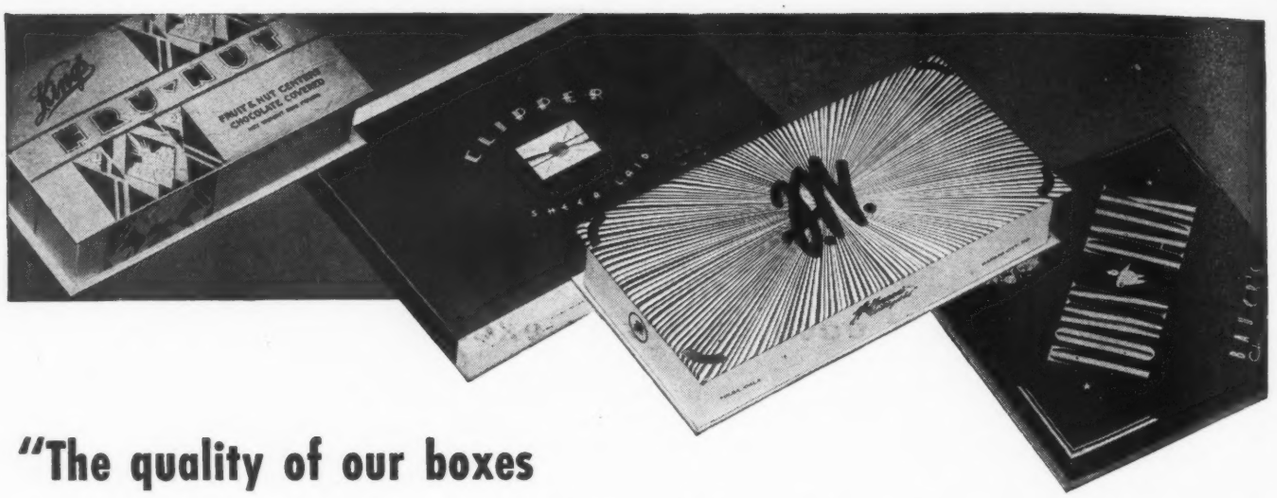
Among 10,000 Pilliod Boxes you will find no two alike. Each has its own distinctive wood grain pattern . . . lovely as only Nature can paint. Each Pilliod Box is individual . . . enhancing the product, lending it prestige, deciding the sale.

Highly adaptable to meet almost any need in an unusual and surprisingly delightful way, wood ignores the usual restrictions of many less desirable, less distinctive materials. Wood enables the skilled hands of Pilliod craftsmen to interpret packaging problems in terms of buyer-preference. Fifty years' experience in working with wood has taught Pilliod how to put wood to work in the specialized field of modern packaging.

Pilliod's production facilities are gradually broadening . . . getting back into quantity production with a diversity of types of packages. In the near future Pilliod's Package Design Department and production facilities will, we hope, be able to accommodate new customers.

THE FINEST PACKAGES GROW ON TREES

DESIGNED BY THE PILLIOD CABINET COMPANY · SWANTON, OHIO



"The quality of our boxes rests primarily upon the quality of the materials we use"

"The firms we serve demand top quality in their set-up paper boxes. They know that *better packaging pays,*" says Mr. E. B. Overstreet, Vice President and Treasurer, National Paper Box Co., Kansas City, Mo. "We in turn know that the quality of our boxes rests primarily upon the quality of the materials we use. In adhesives, Arabol has been our first choice for a great many years."

Arabol serves the leaders in a hundred industries—with specification adhesives for each particular requirement in manufacturing, packaging, labeling and case-sealing. See the Arabol Representative when he calls; he knows adhesives.

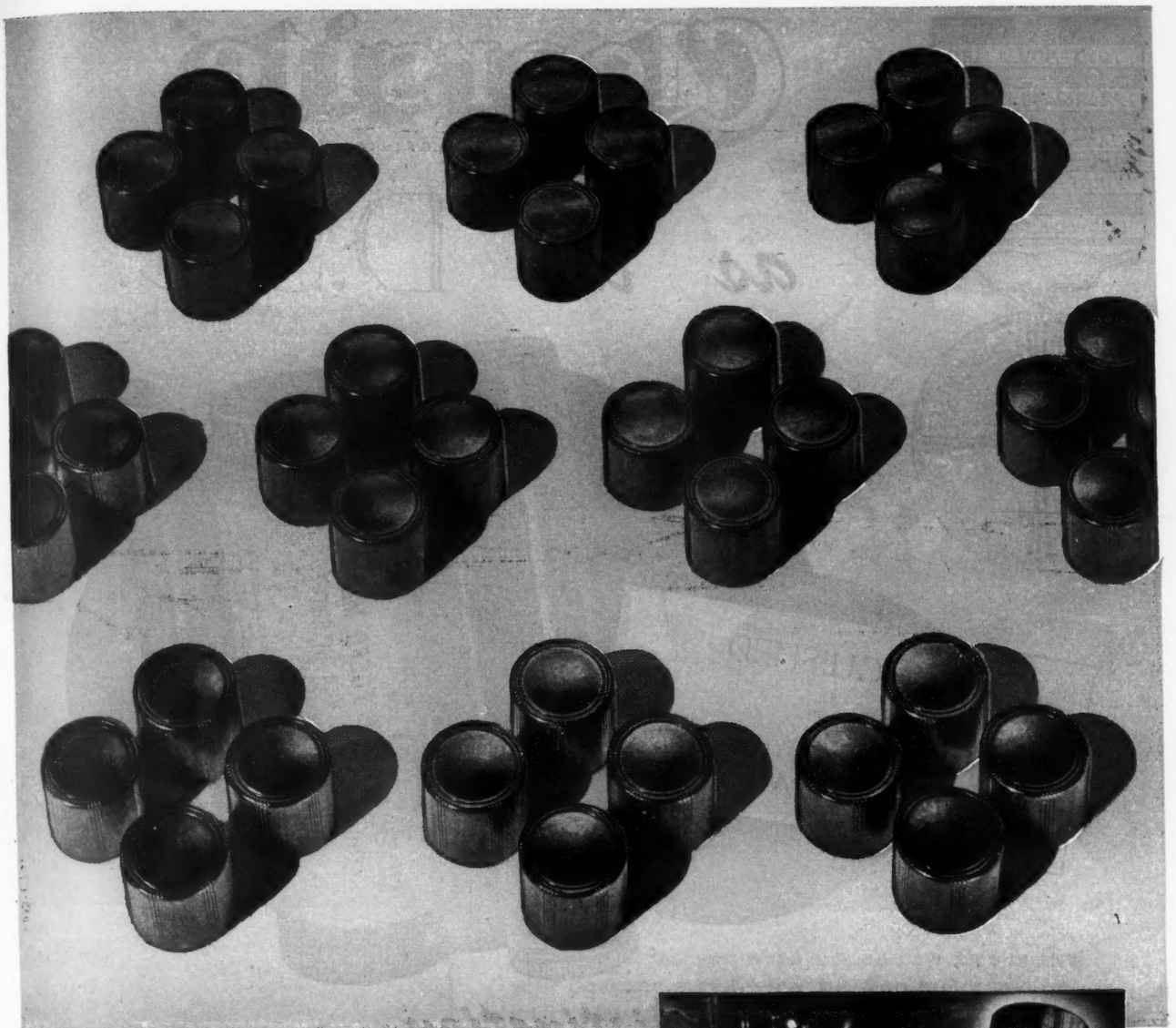
THE ARABOL MANUFACTURING CO.

Executive Offices: 110 East 42nd St., New York 17, N. Y.

CHICAGO — 54th Avenue & 18th Street • SAN FRANCISCO — 30 Sterling Street

Branches in Principal Cities • Factories in Brooklyn, Cicero, San Francisco

Adhesives?... **ARABOL!**



TOPS in their field!

The *right* closure is the finishing touch to a successful package for your product—for example these "Deep Caps" which will soon be available for liquor bottles.

Owens-Illinois plastic closures are designed to give an extra lift to your package—help make it stand out in tomorrow's hyper-competitive market.

Let our designers suggest the correct plastic or metal closure for *your* package . . . the style and the color that will do most to protect your product—and *distinguish* it! Consult us about your particular requirements.

Here's how a bottle sealed with the "Deep Cap" saves time . . . easier to open and to serve from! No need for additional dressing and bands!

CLOSURE DIVISION

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

TOYS - NOVELTIES
PHARMACEUTICALS
MACHINE PARTS
FIRST AIDS - TOOLS
HARDWARE COSMETICS

SHATTERPROOF FEATHERLITE SEAMLESS COLORFUL

Clearsite*

* Reg. U. S. Pat. Off.

as the "D.S.C."

Serving with Distinction on All Packaging fronts!

SHATTERPROOF
SEAMLESS FEATHERLITE
imprinted during manufacturing process

There have been many awards presented to CLEARSITE containers for excellence and performance. It is a goal easier to reach with CLEARSITE, because CLEARSITE *plastic* containers are outstanding in so many virtues: beauty, shatterproof durability, colorful appeal and practical economy of operation.

CLEARSITE*—Cellulose Acetate—Safety Base.

Our Staff of Package-Designers is at your service . . .

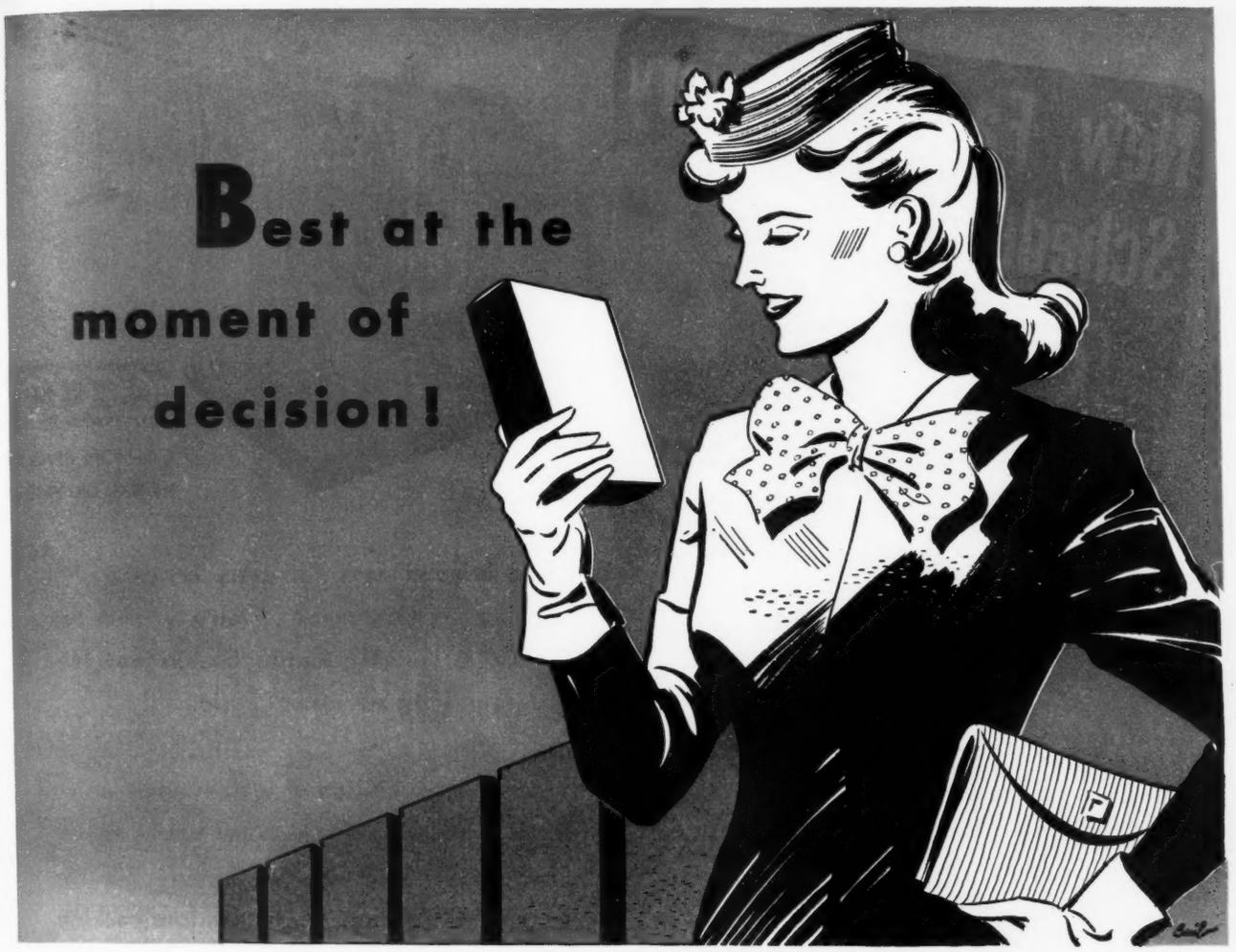
CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

PLASTIC CONTAINERS
AND
PLASTIC PRODUCTS

40 AVENUE L NEWARK 5, N. J.

NEW YORK OFFICE—630 FIFTH AVENUE WEST COAST CONTAINER SERVICE COMPANY, LOS ANGELES 27 CAL



WHY A.C.M. CARTONS EXCEL

Whiter board—more uniform—
velvet-smooth surface—
more rigid—tougher—
better folding qualities—
greater luster and brilliance—
perfect reproduction in either
letterpress or lithography.

The Secret is in the SURFACE!

At that vital moment when *shoppers* become *buyers,* your package may be the deciding factor in their choice. That's why carton selection rates primary consideration in your sales plans. On dealers' counters or shelves it must both *tell* and *sell* to succeed in today's competition.

When your product is packaged in A.C.M. *Clay Coated* Cartons you can be sure that you have put your best "sales front" on display. Their pure white, velvet-smooth surface, produced by an exclusive, continuous process, enhances any design—adds brilliance and luster to either letterpress or offset reproduction.

Accurate control of every step from pulp to finished product assures more perfect cartons, planned and produced to attract shoppers and turn them into buyers!

AMERICAN COATING MILLS, INC.

America's Largest Producers of High Quality Clay Coated Cartons and Carton Board

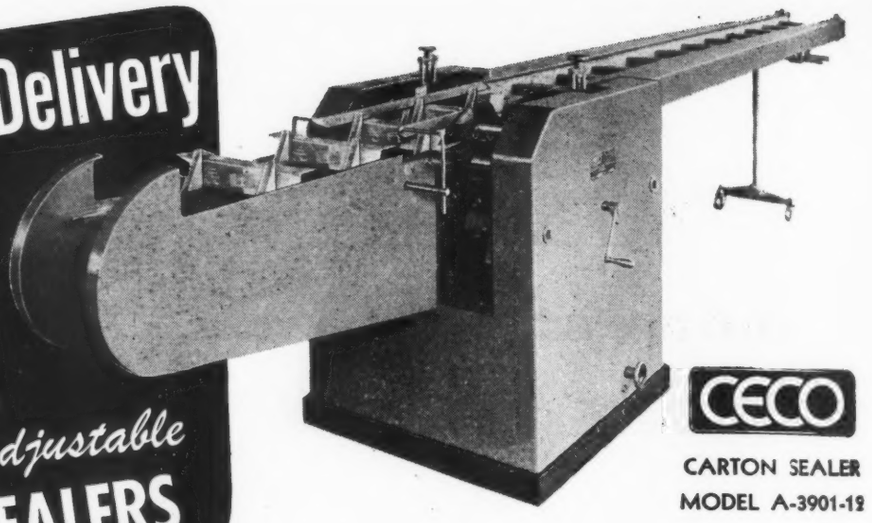
Elkhart, Indiana • Chicago • New York

Affiliated Company: Modern Packages, Inc., Memphis, Tenn.

A.C.M. Clay Coated Cartons

and carton board

New, Faster Delivery Schedule For CECO *Adjustable* CARTON SEALERS



CARTON SEALER
MODEL A-3901-12

Illustrating the versatility of Model A3901-12 CECO Adjustable Carton Sealer are the variety of carton sizes and shapes which one machine can seal.

Here is good news for every concern with a packaging bottleneck. Delivery dates for CECO Adjustable Carton Sealers now on order are being advanced considerably.

The recent acquisition of long awaited labor-saving machine tools has enabled us to increase our production materially. We are beginning to reduce our tremendous backlog of orders to a point where we can offer much better deliveries than heretofore. And the latest model CECO Sealers are built to new high standards of quality.

Send for our new bulletin describing important time- and labor-saving features just incorporated in the CECO Adjustable Carton Sealer.

Features

- ★ Adjustable instantly for different sizes and speeds without tools.
- ★ Handles any free-flowing, non-sifting product.
- ★ Seals both ends automatically, simultaneously.
- ★ Produces square, neat, tamper-proof cartons.
- ★ Portable, self-contained.
- ★ Automatic carton feed available.

CONTAINER EQUIPMENT CORPORATION

Packaging Machinery Specialists

214 Riverside Ave., Newark 4, N. J.

CHICAGO • TORONTO • BALTIMORE • ST. LOUIS
SAN FRANCISCO • ROCHESTER

CONTAINER EQUIPMENT CORPORATION

Thousands of food products owe their shelf-life freshness to protective packaging papers *by* RHINELANDER

CRACKERS OWE THEIR TASTE-LIFE TO PROTECTIVE PACKAGING

Young America's "eyes may be bigger than his stomach"—but whose aren't when taste-teasing foods are placed within reach? As a Nation, we "go for" those crispy, crunchy good things America's food processors have ingeniously created and mass-distributed to everyman's table. Modern food processing and the miracles of food preservation through protective packaging make Uncle Sam's table the world's finest feasting place. Rhinelander's development of specialized types of packaging papers accounts for "factory freshness" of countless edibles. These protective integuments stand guard during long periods of shelf-life in warehouse and store. Controlling the ravages of oxidation and desiccation, they provide two-way protection through retarding moisture/vapor gain or loss—thus assuring flavor and aroma retention while protecting purity by shielding contents from contamination of many handlings. Here at Rhinelander the creation of protective food wrappings is a full-time job. The advantages of such specialization are evidenced at home and aboard in the multitude of American foods kept "factory fresh" by Rhinelander Protective Packaging Papers *from the best that's made to the cheapest that's good.*

RHINELANDER *Protective Packaging* PAPERS

Moisture/Vapor-Proof Coated Glassines
Wet Strength Glassines
Wet Strength Greaseproof
Heat Sealing Coated Glassines

Lard and Shortening Liners
Packing Industry Wrappings
Genuine Greaseproof
Specialty Bag Papers

Confectionery Papers
Cereal Wrapping Papers
Coffee Bag Papers
Cracker Box Liners

Laminated Greaseproof Papers
Wax Laminated Glassine
Greaseproof Innerwraps
Opaque Label & Bag Glassine

RHINELANDER PAPER COMPANY • MILLS AT RHINELANDER, WISCONSIN, U.S.A.

HI-BINDER

Wrappers

MADE TO YOUR SPECIFICATIONS

No rigid limitations or prejudices of style limit HI-BINDER. A wide variety of laminated cloth, metal, paper, cellophane and foil wrappers are available—ready to be cut and fit to your product, neatly as a G I's first civilian suit.

In war, HI-BINDER protected GI goods from wind, rain, hail and snow. Now, this same quality protection will help you insure the flavor, freshness and aroma of your product. Adaptable to suit every need, HI-BINDER is ready to solve your packaging needs. It can be cut and fit, "tailor made," if you will—to your exact specifications.

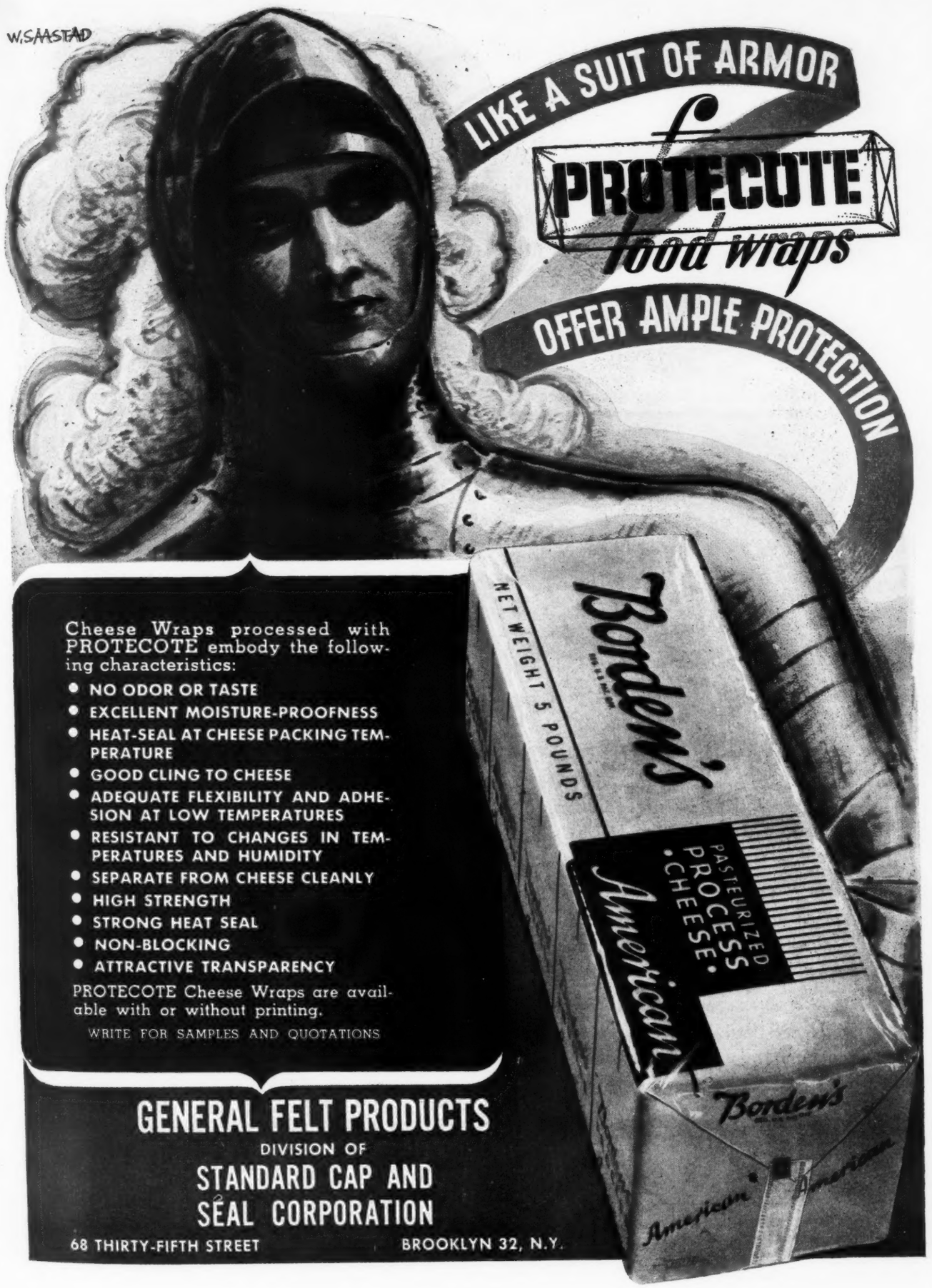
HI-BINDER is ready to work for you now. Men who know the HI-BINDER abilities and qualifications are yours to command. Write for samples and more information.

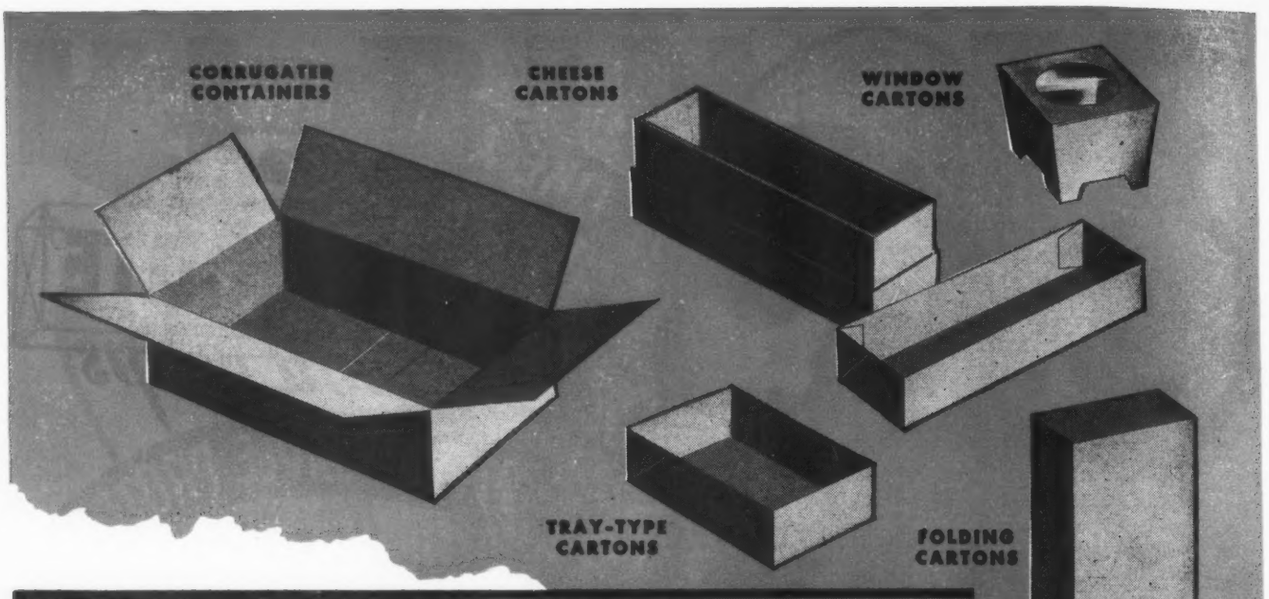
THE CENTRAL OHIO PAPER CO.

226 NORTH FIFTH ST. COLUMBUS 16, OHIO

***ALSO IN* DETROIT, CLEVELAND, PITTSBURGH, DAYTON, TOLEDO, INDIANAPOLIS, CHARLESTON**

Converted by
The Floyd A. Holes Co.,
Bedford, Ohio


W.S.AASTAD
LIKE A SUIT OF ARMOR
PROTECOTE
food wraps
OFFER AMPLE PROTECTION
Cheese Wraps processed with PROTECOTE embody the following characteristics:
• NO ODOR OR TASTE
• EXCELLENT MOISTURE-PROOFNESS
• HEAT-SEAL AT CHEESE PACKING TEMPERATURE
• GOOD CLING TO CHEESE
• ADEQUATE FLEXIBILITY AND ADHESION AT LOW TEMPERATURES
• RESISTANT TO CHANGES IN TEMPERATURES AND HUMIDITY
• SEPARATE FROM CHEESE CLEANLY
• HIGH STRENGTH
• STRONG HEAT SEAL
• NON-BLOCKING
• ATTRACTIVE TRANSPARENCY
PROTECOTE Cheese Wraps are available with or without printing.
WRITE FOR SAMPLES AND QUOTATIONS
GENERAL FELT PRODUCTS
DIVISION OF
STANDARD CAP AND SEAL CORPORATION
68 THIRTY-FIFTH STREET
BROOKLYN 32, N.Y.
Borden's
NET WEIGHT 5 POUNDS
PASTEURIZED PROCESS CHEESE
American
Borden's
American
American



PLANNED PACKAGING and PLANNED BUYING... *talk the same language!*

PLANNED PACKAGING is a service especially developed to meet the full range of problems and requirements which today's purchasing departments must cope with.

It coordinates research, development, design, manufacture of board, conversion, and testing.

It coordinates containers, display units, and individual cartons for economy and convenience on the packaging line, in the warehouse, on dealers' shelves and counters.

With headquarters at Rittman, Ohio, just 50 miles south of Cleveland, the location facilitates economical deliveries east, west, north, or south.

You will find the men in our district offices both experienced and resourceful in helping you meet your special requirements.

THE OHIO BOXBOARD CO.

RITTMAN, OHIO

Manufacturers of paper board, folding boxes, corrugated and fiber shipping containers, and converted specialties

SALES OFFICES: RITTMAN • AKRON • CLEVELAND • CINCINNATI • PITTSBURGH • NEW YORK • CHICAGO

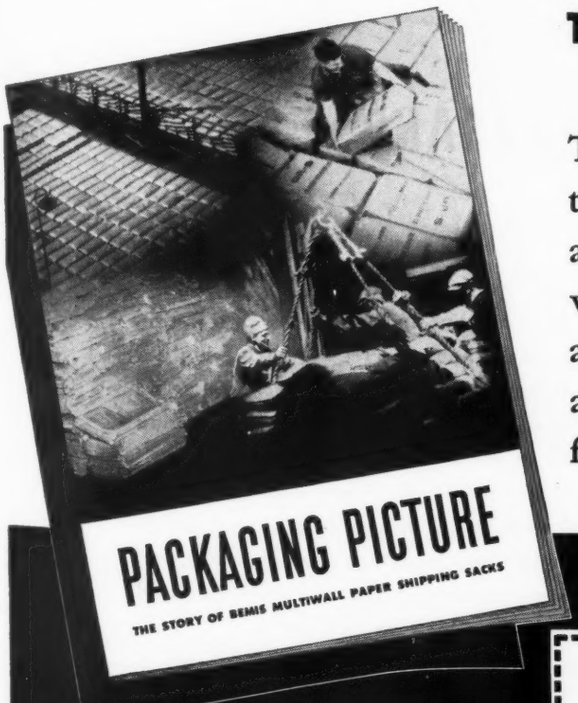
Capacity 500 tons daily

New! Complete! Concise!

THE BEMIS BOOK ON MULTIWALL PAPER SHIPPING SACKS TELLS HOW YOU CAN GET...

1. Better, low-cost packaging
2. Safer, surer shipping protection
3. More efficient packing operations
4. Faster, more economical handling
5. Finer, more legible brand printing

Send for "PACKAGING PICTURE"



The Story of BEMIS Multiwall Paper Shipping Sacks

This new 16-page book—largely pictorial—shows how Bemis Multiwalls are made . . . how you can use these versatile shipping containers most advantageously . . . how Bemis Packaging specialists can help you. You'll find it interesting as well as beneficial.

Your copy is ready for you Today

Bemis Bro. Bag Co.
408 Pine St., Box 4, St. Louis 2, Mo.

Please forward my copy of "PACKAGING PICTURE."

*Name*_____

*Firm*_____

*Product*_____

*Street*_____

*City*_____ *State*_____

BEMIS BRO. BAG CO.

Peoria, Ill. • East Pepperell, Mass. • Mobile, Ala.
San Francisco, Calif. • St. Helens, Ore. • Wilmington, Calif.

Baltimore • Boise • Boston • Brooklyn • Buffalo • Charlotte
Chicago • Denver • Detroit • Houston • Indianapolis • Kansas City
Los Angeles • Louisville • Memphis
Minneapolis • New Orleans • New York City • Norfolk
Oklahoma City
Omaha • Orlando
St. Louis • Salina
Salt Lake City • Seattle
Wichita

"PAPER HAS A THOUSAND FACES"

No other material surpasses paper in its variety of forms, and in the number of differing services it renders to civilized living. Outstanding among these services is packaging.

The whole structure of modern merchandising depends upon modern packaging and the scientific adaptation and economical utilization of paper to protect, to preserve and to display. In this field Nashua has pioneered through the development years just as it leads today in variety of products and in diversity of processes. Nashua's field is the field of packaging. Nashua's processes include coating, waxing, gumming, laminating, printing and embossing. Nashua products range through box coverings, bread wrappers, candy wrappers, carton coverings and liners, transparent wrappers, gummed paper and tape, sealing machines.

As packaging serves the modern way of life, Nashua serves packaging.

CREATORS • CHEMISTS • CRAFTSMEN
NASHUA
MAKES PAPER MAKE MONEY FOR YOU

NASHUA GUMMED AND COATED PAPER COMPANY, NASHUA, N. H.

MODERN PACKAGING
VOLUME 19 JULY 1946 NUMBER 11

The role of the designer

. . . his contribution to package development

Many businessmen do not understand just what goes on behind the package designer's studio doors. For this reason, the Editors of MODERN PACKAGING asked a panel of successful designers to list their services and methods of operation.

The surprising degree of uniformity in their answers, from which this article has been compiled, reveals that, in general, the designer's procedure may be broken down into seven steps:

1. Preparatory work and study.
2. Analysis of the information gleaned in Step 1.
3. Specific study of the client's product and marketing problems.
4. Preliminary sketches leading up to the final sketch.
5. Presenting the final sketch and reconciling differences of opinion.
6. Making of working drawings.
7. Cooperation with suppliers for reproduction of designs.

The extent of the designer's contribution to a finished package will depend upon two factors: (1) the size and degree of development of the manufacturer's packaging department, and (2) the versatility and size of the designer's staff. If the former is large and the latter small, only a satisfactory preliminary sketch and a good working drawing may be needed; if the reverse is true, the designer may undertake the entire development of the package from start to finish. Furthermore, he may round out his plan by designing the shipping container, display pieces, etc.—and his organization may even be prepared to suggest new recipes for food products. Some designers—Egmont Arens, for instance—not only design packages for the product manufacturer or chain store owner but also suggest potential packaging uses to the materials manufacturer.

Designers and design studios who contributed the ideas incorporated in this article:

John E. Alcott
Egmont Arens
Lucian Bernhard
Alan Berni
Charles Cruze
Charles C. S. Dean
Frank Gianninoto
Frances Cushing Hall
C. McStay Jackson
Howard Ketcham
Koodin-Lapow Associates
E. Leonard Koppel
George R. Kraber
Mildred C. Lucas
Eugene Lux
Margery Markley
Jim Nash
William O'Neil
George Sakier
Jon Stengren
Martin Ullman
Van Doren, Nowland & Schladermundt
John Vassos
Leonard Wheeler
Georges Wilmet
Emmy Zweybruck

The designer as he sees himself

Many of the designers have stressed those aspects of their work which include the functions of market researcher and the manufacturer's packaging department. Designers who stick to design alone, however, can contribute to the other aspects of package development. Jim Nash states the latter case: "Most of our clients have production or plant managers who, with the help of their research departments, develop a practical package to protect the product and specify the sizes needed to satisfy their market. If the client has no production manager, we recommend that he contact package machinery companies and package material suppliers for advice in developing a practical, economical package. Our experience with other products frequently helps us to direct these clients in the proper channels, but we do not undertake to interview package machinery suppliers or package material suppliers."

Though the designer's job is, in many ways, becoming standard, his concept of what his contribution should be, and his attitude toward his clients, vary. Designers with diametrically opposite attitudes have been completely successful and so have those whose philosophies lie between the extremes. We quote from some of them below.

Lucian Bernhard: "The package designer

is an artist who makes your product be seen and conquer. . . . Like a cook, he can do a better job if the importance of his work is appreciated, if he is unhampered by clients' preconceived notions due to familiarity and interest in the details of the product. . . . Remember that you don't tell your doctor what to prescribe—don't tell a good designer how to design your package."

E. Leonard Koppel: "We emphasize utter objectivity during all conferences with the client. This is an important feature in the successful designing of a package that is often overlooked. A proper basis of understanding between client and designer lays the groundwork on which both may work. . . . Although I may not personally like a particular color, shape or theory of design, if it is my belief that any or all of these are right for the product, I am going to use them. And I want my client to disregard personal dislikes or prejudices . . . . I encourage and accept constructive criticism."

John Vassos: "Manufacturers know that it does not cost any more to make a good looking package than it does to make an ugly one. They have accepted the designer as a necessary and important cog in industry, but both packaging and industrial designers will lose the ground they have gained unless they contribute honest and sensible solutions to the manufacturer's problems and give the values that are so necessary to our aesthetic expression."

Frances Cushing Hall: "Many clients have personal prejudices which the designer cannot understand but which should be considered."

Martin Ullman: "I believe the designer must be absolutely honest in his approach to a problem, and to his client. He must be unbiased as to sources of material, types of material and fabricators. He must become a cooperating part of the business which engages his services, and must get every fact about the product before he attempts creation of any new package. Having created a new package, the designer should personally follow its production through the plants of material supplier and fabricator, to insure uniformity of quality in the finished package."

Leonard Wheeler: "Because most package designers started as artists, they are more concerned with outward appearance than with the less glamourous fundamentals of packaging. They decorate their packages beautifully, then compromise their designs to fit whatever the material suppliers can provide. The result is usually a quick demise for an otherwise attractive container."

Emmy Zweybruck: "I believe that the most satisfactory practice is to have one artist design the whole line. The artist's ideas and style can only be carried out by repetition. One item among ten other brands can never present competition, whereas ten items, all designed by the same person, are sure to be noticed."

Prepatory studies

"What do you need, and why?" Before starting a package design, Jon Stengren likes to eye a product squarely and ask himself those questions honestly.

Usually, the designer's first step is some sort of research into the marketing aspects of the product and a study of the good and bad points of the old package. This may include a full-dress field survey, or the research may merely comprise, as Eugene Lux archly states, having enough knowledge not to design a package for sausages which looks like one for cosmetics.

Before he touches his drawing board, the design specialist will also want to know the client's production line problems and something of the history of the product after it leaves the packaging line. He may, as John E. Alcott does, have a highly developed checklist of questions which must be answered before the work of design begins. The Alcott list includes: first, an analysis of the product, its competition, its sales appeal, its size; second, a determination of the function of the package, and finally, a determination of the product's packaging requirements which will best meet the needs of consumer, retailer and manufacturer.

Getting acquainted with the client and his plant (in shirt-sleeves, if possible) seems to be an important preliminary. Ben Koodin's program for this is typical. He suggests first a round-table discussion with key executives and department personnel to clarify controversial points and crystallize vital problems. Next comes a plant survey following the product through production, assembly packaging and shipping to determine possible limitations and potential opportunities for the package.

In rubbing elbows with the client, the designer should determine, as Mildred Lucas points out, whether or not the new package is to be his special "baby." If it is merely an addition to a well-established line, it should incorporate all that is good in the related packages. But if it is to be new, and heavily promoted, it should reflect some of the client's own ideas.

The manufacturer's advertising department may have a great deal to do with the package design. A study of past advertising furnishes many useful clues to the designer. The advertising department may require, as Charles Cruze suggests, that the package design look well when reproduced in a single color in a newspaper as well as in the dealer's window.

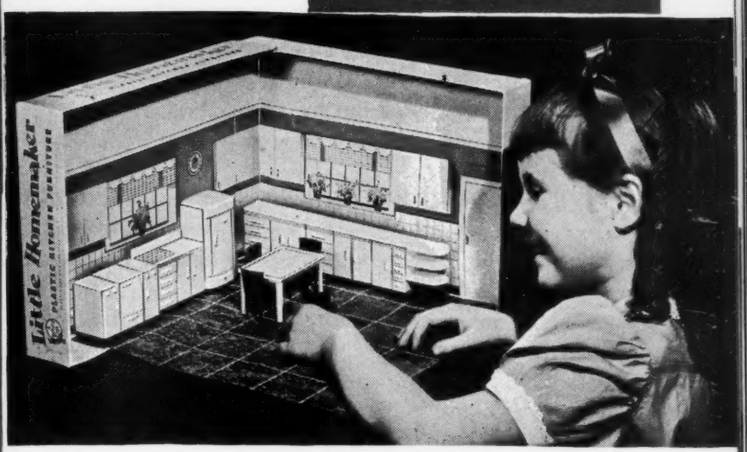
Whether or not a radical design innovation may be attempted will depend to a large extent upon the advertising budget. Eugene Lux cites a successful package which was similar to a heavily advertised competing line, and another successful line which was completely different from anything seen in the trade before. He mentions a good redesign in which the "feel" of the old package was kept, and an equally happy one which broke all traditions of the client.

Package ingredients

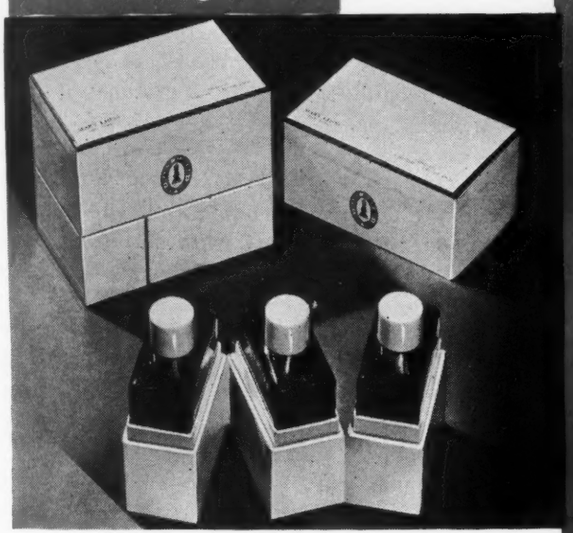
Once he knows what he is packaging—and in what type of container—the average designer, before making his preliminary sketches, will decide upon the visual functions of each element of his package. Lucien Bern-

Koodin-Lapow

Eugene Lux



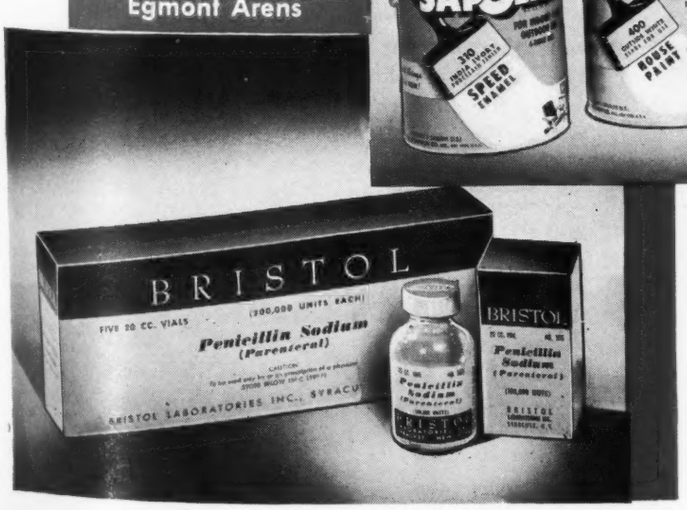
Jon Stengren



Charles Cruze

Jim Nash

Egmont Arens



Many of these pictures have previously appeared in MODERN PACKAGING. *They have been selected as typical of the work of a few of the designers who have contributed to the accompanying article.*

hard analyzes them for us: "Color, lettering, lay-out and illustration. Every package, from nuts to washing machines, makes use of at least the first three ingredients. Sets of rules and charts even exist on how to mix them. However, as the best food is cooked not just from a cook book but by an expert chef, so the best package is created not by rules alone, but by an expert package designer.

"The designer uses color to attract attention, identify, convey quality. Out of the million possibilities, appropriate combinations can be devised for any product on the market. . . .

"Lettering deserves more attention than it usually receives. Any Chinese proverb to the contrary notwithstanding, the words 'Noodle soup' on the label are worth many pictures, and of prime importance to the housewife (unless she prefers mock turtle).

"Layout becomes more important as more descriptive copy is required. The balance of trademark, content, description and illustration must be carefully and logically achieved.

"Illustration of the product on the package is increasingly popular. Here the designer's rule is simple: Illustrate the product if its illustration can be attractive. But some things, like some girls, simply are not attractive enough to be shown in a picture. Peas and peaches look fine on a label, but if you can make spaghetti with meat sauce look appetizing in four colors on two square inches, you are a better man than your favorite package designer."

Most designers agree upon these basic elements, but from there on, they are apt to differ widely.

The trademark is another important package ingredient. If an entire line of new packages is being created, Charles Dean suggests a trademark, trade device or some design treatment which will act as the theme for the whole line.

Alan Berni suggests that the "atmosphere" is one of the more important elements in package design. One manufacturer may see his product as having a strong element of elegance; another may prefer to use a more colorful, more robust approach. This attitude of the manufacturer should be reflected in the package, blended with elements which will encourage the prospective customer to buy. Sand soap would be impractical in a pastel cardboard container and face powder in an unglamourous khaki tin can would be even more of a failure.

Related to the "atmosphere" element is what G. McStay Jackson calls the "shock value" and the "repeat value" of the package. The usual elements of form, color and texture all have their place here, but a major ingredient for a package which will have "shock" value is a product name which will be adaptable to visual representation on the package. If the product name has not yet been chosen, the Jackson studio likes to help the client make his decision with this factor in mind.

In contrast to the "shock value" theory is Georges Wilmet's firm belief that all elements of design should be classical, with no emphasis upon novelty appeal regardless of the product. He feels that a good package design is one what should sell the product over a period of at least ten years and he never uses anything which hasn't proved the test of time. In his estimation, a good package should, at a glance, identify the product and the maker's name, reflect quality and inspire confidence in the maker. Nevertheless, this designer feels that sales appeal should never be forgotten. For example, though, he believes that all drug packages should be "ethical" in appearance, drugs intended for popular consumption, like vitamins, must come in containers keyed to popular consumer demand.

The sketches

The designer's procedure in evolving and presenting his design is up to him, and the answers on this score are as varied as the Artistic Temperament and the Industrial Mind. Sometimes the preliminary sketch is not made until *after* all physical and visual requirements have been carefully analyzed; sometimes it is made *before* such an analysis and is then adapted to the requirements of the product. One designer may dash off a rough sketch, submit it to the client for his reaction and then try again and again until a final design is agreed upon. Another may show the client a single design and say: "Here is your package; this is how it should be."

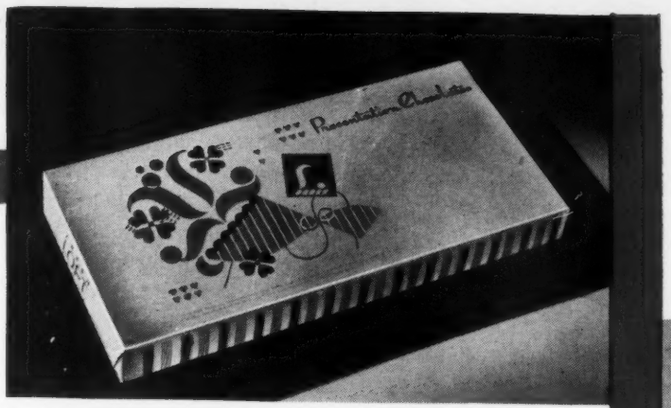
Several designers observed that the number of preliminaries shown to the client might well depend upon the client himself. Some clients may be reluctant to approve anything till they have seen "a lot of ideas." As a letter from the Lea Tek Studios observes: "For his money he may want to bet the field, combine ideas that are presented and finally arrive at the 'master package.' The extent of this work is up to the designer and his ability to construct or stage the customer's reactions."

Sometimes the designer will test the preliminary design before submitting it—and the degree and method of testing, too, runs the gamut. Howard Ketcham, for example, will make a series of trial designs and color schemes based upon the merit factors revealed in market tests of competitive packages. When a design is developed which consumer tests prove to be more acceptable than competitive packages, it is *then* adapted to the client's particular needs and price limitations.

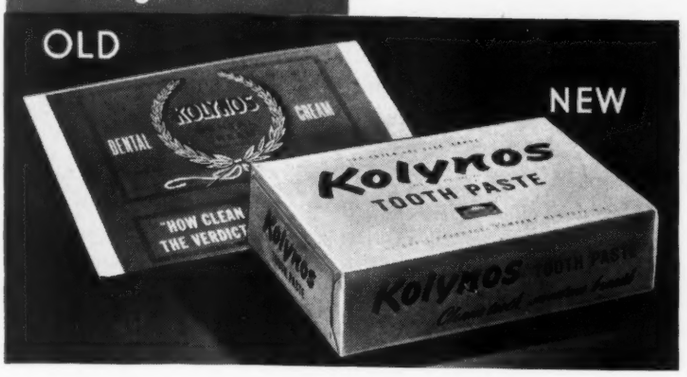
The method employed by the firm of Van Doren, Nowland & Schladermundt is to make many preliminary drawings, developing the most feasible in finished form with paper models. "The package is then tested for distance visibility and legibility. The effect in stack displays is determined. The carton is given a rigid shipping test. A small group of consumers is asked to express an opinion. Finally, the design, complete with working drawings and backed up by analysis and testing, is turned over to the client."

Before a design is finally approved, the designer may present it to the client together with competitive pack-

Charles C. S. Dean

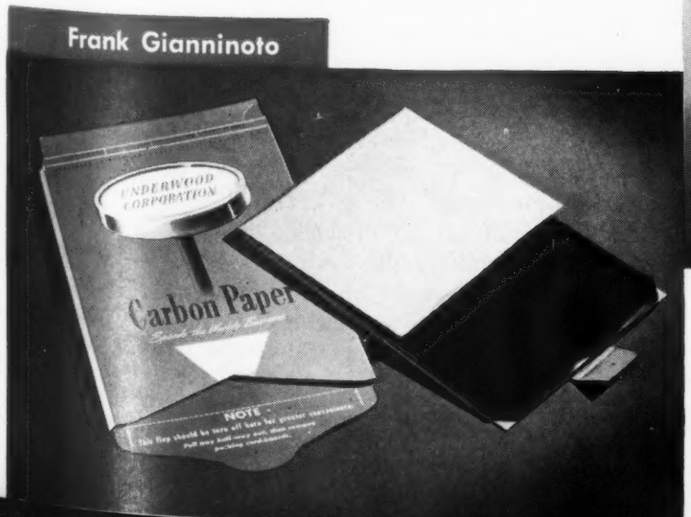


Georges Wilmet

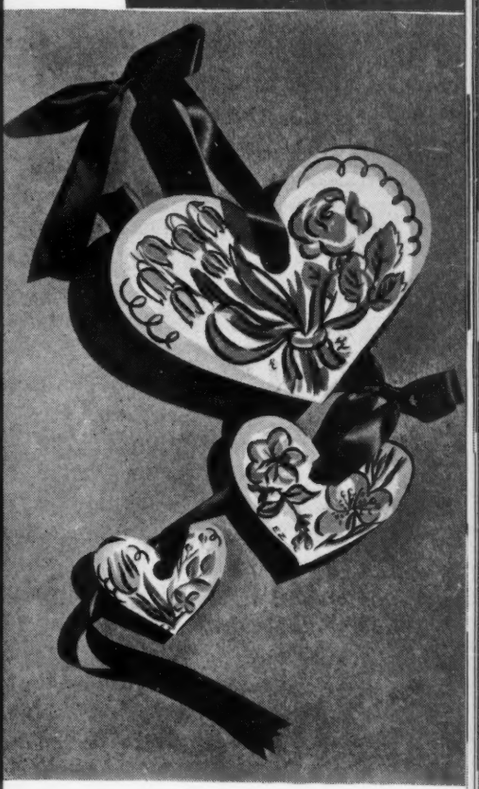


Martin Ullman

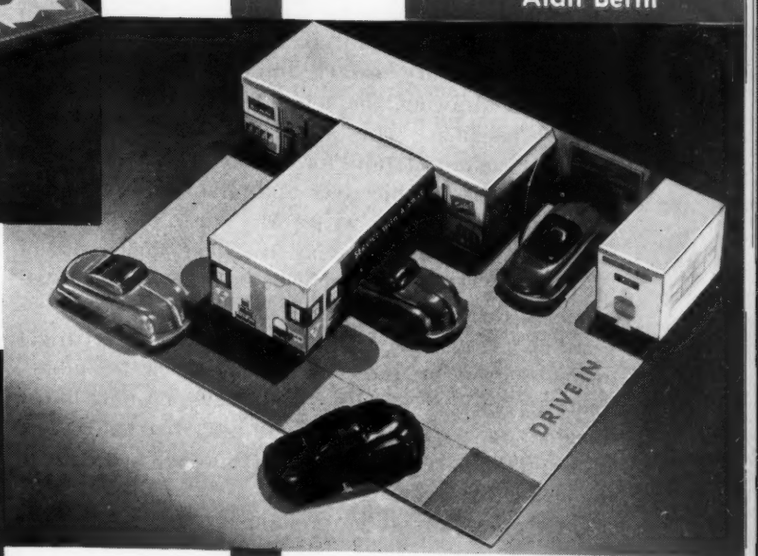
Frank Gianninoto



Emmy Zweybruck



Alan Berni



ages. Lea Tek follows this practice of "bringing the store to the studio" by setting up dummies of the new designs on shelves containing the packages of the client's principal competitors. The client is urged to make his own arrangement of both packages and lighting to see how the projected design measures up under all circumstances.

Some designers feel, as does George Sakier, that there should be many rough sketches, all discussed at length with the client. "At this point, the highly critical and highly expectant audience will react more violently and directly than at any later time. The experienced designer will quickly recognize which is dead material and which has vitality—which is pertinent and which is irrelevant. The designer will be definitely oriented, and often the client, too, is able to better clarify in his own mind his needs. By showing that he is resilient and not thin-skinned and that he welcomes the bluntest criticism, but has the right to make sure that this criticism is not emotional or prejudiced, he will establish a sound working basis."

In contrast to this point of view is that of the designers who believe that if their preliminary study of the product and the market has been thorough, the first sketch is bound to ring the bell. William O'Neil presents this sketch together with one or two evolutionary roughs. "If it is basically right according to preliminary studies," he states, "it will 'belong'—and I don't care how many changes, revises or new ideas are injected into the picture by the stenographers, assistants to the president or packaging committee. They will always return to the first sketch. . . . Final sketches, therefore, are 90 percent passed by all committees."

Similarly, Frank Gianninoto writes: "Preliminary steps are based on a study of estimated requirements and are discussed with the client. Basic directives and specifications are stipulated to ensure that the final product be in accord with the thinking of the client and our own organization. As a result, the final sketches leave only minor points to be adjusted."

As a "preliminary" sketch, Jim Nash shows his client a full-color drawing, the actual size and shape of the finished package. This sketch incorporates the designer's recommendations for solution of the sales problems, advertising objectives and production problems. "The colored sketch," writes Mr. Nash, "is usually a complete presentation having the final appearance of the package. It can be used for sales meetings and tested in stores for visability and shelf value against competition. It can be used for legal approval, or to get estimates from producers or as a guide for the advertising agency. In other words, it leaves nothing to the imagination. We seldom submit more than one design. If our preliminary study has been thorough and correct, the changes are never serious."

On the subject of the preliminary sketch, designer Mildred Lucas cautions that it "may be packed with dynamite if shown to a client in its raw state. While the artist has in the back of his mind all the necessary mechanics, he approaches this first sketch with a creative freedom which very often results in a brilliant and handsome package which, if seen in its unhampered state by the client, may well become his yardstick for the final design. When the artist refines the design and injects all the elements necessary for reproducing it, it may well be too far a cry from the preliminary and too disappointing to the client."

The final sketch

Regardless of whether the manufacturer first sees his new package in the form of a finished drawing or whether he has watched its evolution from a preliminary "rough," the designer has put in a great deal of work before the climactic meeting at which his work is finally approved. At this point, the design generally represents a completely integrated compromise between artist and client. Usually, it is the designer's original idea as modified by the client's criticism.

In form, the final sketch may range from a finished air brush rendering to a detailed dummy package containing the product. If the finished package is to be made of paper, paperboard or wood, the dummy may be presented in the final material; if it is to be made of a plastic, the designer may fabricate a dummy from a similar material, or he may present a plaster of Paris model.

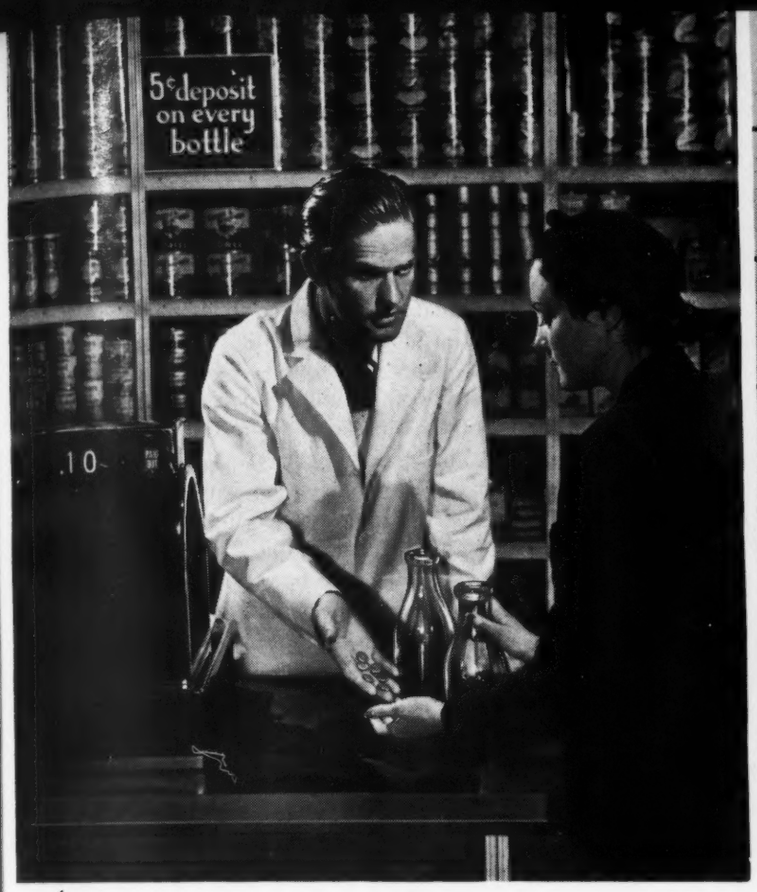
After the final sketch has been approved, Designer George Kraber suggests the presentation of isometric cutaway drawings of the package and of its exterior shipping container. These serve a threefold purpose: (1) they enable the client to visualize the package as a whole; (2) they facilitate the assembly of the containers delivered in knock-down form; (3) they aid the suppliers of inner and outer containers in giving price estimates.

Working drawings and cooperation with suppliers

Most designers prefer to make their own working drawings and many of them like to stay on the job at least until the completed package is in the hands of the client.

Alan Berni outlines these steps as follows: "The working drawings are made to exact specifications. The typography on the package is set in an attractive and suitable typeface. Then reproduction proofs are made and put into the correct position on the drawings. The art work is usually made larger than specifications so it will reduce to a clear, sharp cut when the plates are made. In most cases, the designer works at this stage, in close cooperation with the suppliers. Die sheets are secured on exact dimensions, or blueprint drawings of specifications may be submitted by the designer to the supplier for execution."

The extent of the designer's final work depends largely upon the specific services offered by his studio. Before turning over the job to the printer, some designers will make whatever drawings or color photographs are necessary, order the (*continued on page 164*)



1

2

PHOTOS 1, 2, 6 AND 7, COURTESY AMERICAN CAN CO.

1—Neither the grocer nor the customer likes the necessity of collecting and paying out deposits on the carry-home bottle, or of handling, storing and returning the heavier container. **2**—*Ease of disposal is a strong factor where consumers show preference for the paper milk container, according to the survey.*

The milk container . . . paper and glass

by Alexander Morrow

Milk was sold in paper containers in Los Angeles as early as 1908. The first containers, however, were comparatively crude and nearly 30 years elapsed before the techniques of packaging milk in paper had advanced sufficiently to enjoy widespread adoption.

After the paper container was launched on a large scale in 1936, its use spread rapidly until the war emergency prevented the further installation of paper container operations. The growth of paper during this brief period was impressive, however. In 1941, about 300 milk plants, distributing milk in more than one thousand cities, towns and villages, employed paper containers in packaging some portion of their milk supply.[1] It was stated in 1943 that about 5 million paper containers were used daily or in about one of every eight sales of milk in that year.[2]

Milk distributors of the country have been engaged since the end of the war in an appraisal of the paper container in the milk business. What is the present position of the paper container and what are its prospects in the period lying ahead? How far is it desirable to discard glass from the standpoint of costs, sanitation and sales?

The economics of glass vs. paper are still being warmly debated in the milk trade but the older fears that a paper container was less sanitary than glass have been largely dispelled. Experiments conducted several years ago at the Illinois Agricultural Experiment Station to determine whether milk containers were sanitary disclosed that various operations in the manufacture of paper were bactericidal.[3] Bacteria did not penetrate the walls or seams of the paper containers, which were thus sanitary, the experiments indicated. Paraffining paper containers was bactericidal in effect and the sterile condition of containers demonstrated that spore-forming organisms surviving

[1] Hermann, Louis F., and Welden, William C., "Pre-War Developments in Milk Distribution," U. S. Dept. of Agriculture, Farm Credit Administration, Nov. 1942.

[2] Dr. Ernest Kelly, Assistant Chief, Bureau of Dairy Industry, U. S. Dept. of Agriculture.

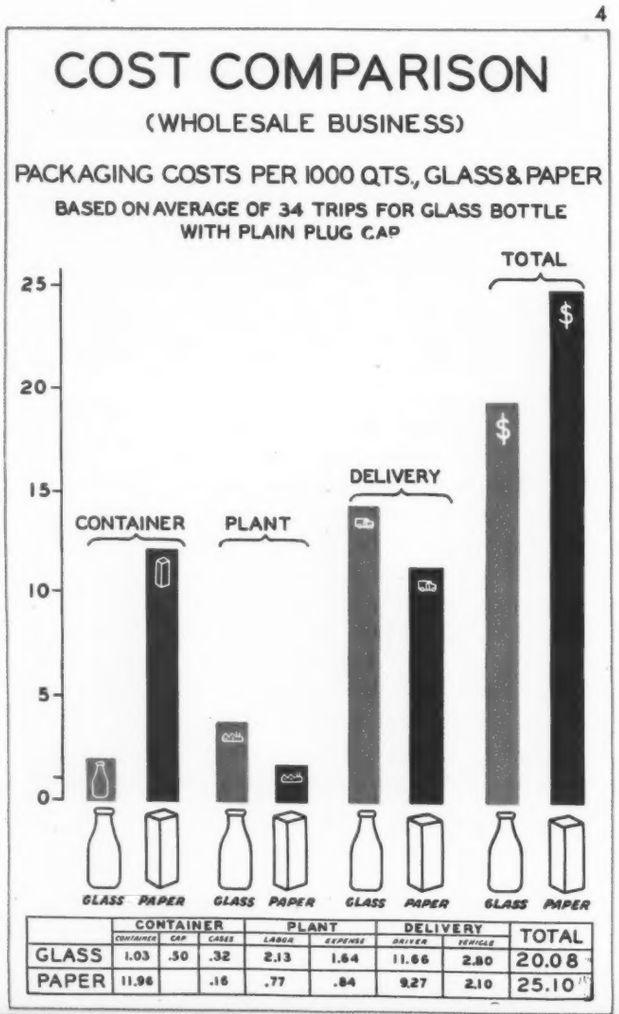
[3] Illinois Agricultural Experiment Station Bulletin No. 495, 1943; see also "The Bacterial Population of Paper Milk Containers in Relation to Moisture-proofing," N. Y. Agricultural Experiment Station (Geneva), Tech. Bul. 263, 1942.

PHOTOS 3 AND 5. COURTESY OWENS-ILLINOIS GLASS CO. 3

3—Although facts may not support them, many still feel that milk in glass is safer, purer and more appetizing.

4—Glass is far cheaper in original cost and 20% lower in total costs, but paper demonstrates opportunities for savings in plant as well as in delivery costs. This chart is from a cost survey made for Owens-Illinois Glass Co. by Stevenson, Jordan & Harrison, management engineers. Study was based on round bottles.

4



	CONTAINER			PLANT		DELIVERY		TOTAL
	container	cap	cases	labor	expense	driver	vehicle	
GLASS	1.03	.50	.32	2.13	1.64	11.66	2.80	20.08
PAPER	11.96		.16	.77	.84	9.27	2.10	25.10

production of the paper were prevented from entering the milk. However, research is continuing into the subject to clarify any unsettled point and dispel all questions which have arisen.

Other experiments carried on at North Carolina State College indicated that the riboflavin loss from milk exposed to the sunlight was much greater in glass bottles than in paper containers.[4] Milk in paper containers exposed to the sunlight for six hours would lose only 10% of the riboflavin while the comparable figure for milk in glass bottles was 80%.

Consumer surveys also have shown a preference for paper containers. In a survey conducted at the University of Illinois, for example, 50% of the respondents declared they would be willing to pay a one-cent premium for milk in paper containers.[5] Virtually none of the respondents would choose the glass bottle if it were sold one cent higher than paper. The foregoing considerations make it clear that the degree to which the industry shifted to paper would depend chiefly upon the cost factors involved.

Paper containers have thus far been used almost exclusively on store and wholesale routes. Thus, in Los Angeles paper containers were used on 55% of all wholesale milk (excluding sales of bulk milk) but on only 1% of the retail milk. In New York City the paper container has been used in packaging 40% of the milk sold on wholesale milk routes.

The existence of this fact is not surprising. The principal disadvantage of the paper container is the much greater container cost per trip in comparison with glass (see Fig. 4). The container cost per trip of glass depends, however, upon the life of the milk bottle or the number of trips it makes. The trippage on bottles that are used in wholesale deliveries is much less than on those in the retail trade because retail route men pick up the bottles as they make their rounds while store customers return the bottles themselves. There is, therefore, a small cost differential per trip in the use of a glass bottle as compared to paper on store routes.

At the same time the various advantages which paper does have in relation to glass are almost entirely present in wholesale operations. Paper containers entail lower delivery costs because trucks are then easier to load. The lighter weights of paper containers and the cases holding them permit the handling of larger loads on the route and more rapid delivery per customer. Time is also saved in delivering milk because the empty bottles do not have to be collected in the store and carried to the truck. The sorting and return of empty bottles is also eliminated.

On retail routes the total load is less and deliveries per customer are so small that relatively little advantage is derived from performing the delivery function in paper containers. Nor do home delivery customers have to carry a bottle nor return an empty one.

---

[4] Field experiments made by F. M. Haigh, Dr. Walter Peterson and A. O. Shaw, North Carolina State College.

[5] Tracy, P. H., paper delivered at the Milk Marketing Conference, University of Illinois, Jan. 7, 1941. University of Illinois, Agricultural Economics Dept.

(*Page 96*)

The retailer on the other hand seems to prefer the paper container because he does not have to collect deposits on bottles or handle returned bottles and provide valuable space for them. The store customer also finds it more desirable because he carries a lighter package from the store and does not have to return an empty bottle.

The consumption of milk in industrial plants has grown considerably in the last few years. Most factories prefer the paper container because the empty bottles are not always returned to the cases and constitute a danger and nuisance.

From the standpoint of costs, however, the savings in delivery cost resulting from paper operations is usually more than offset by larger processing cost, resulting principally because of the cost of single service containers (see Fig. 4).

A study made several years ago[6] disclosed the following:

TABLE I—A COMPARISON OF TOTAL FACTORS AFFECTING COMBINED PROCESSING AND DELIVERY EXPENSE RELATING TO FIBRE AND GLASS CONTAINERS (4 LOS ANGELES MILK-DISTRIBUTING PLANTS)

			Dual operation	
Items of expense	*All-glass operation, cents*	*All-fibre operation (type B), cents*	*Fibre (type C), cents*	*Glass, cents*
Factors affecting processing (including container expense)	0.8530	1.7116	1.8722	0.7245
Factors affecting delivery exp.	1.1051	0.6009	0.6841	1.1433
Total cost	1.9581	2.3125	2.5563	1.8678
Costs of fibre (type B) over glass operation		0.3544		
Costs of fibre (type C) over glass for dual operation		.....		0.6885

[6] Vehlow, E. L., "The Single-Service Container and Its Effect on Milk-Distribution Costs," *International Assn. of Milk Dealers Bulletin*, Vol. 33 (1941), pp. 418–430.

It is apparent from the foregoing table that delivery expenses are considerably less when paper containers are used. The processing expenses are higher because of the greater cost of the paper container. Washing and filling, fuel, power and light expenses are less because of the elimination of bottle washing.

The substantially increased use of the paper container depends, therefore, upon reducing the cost of the paper container. If the cost is lowered enough, the reduced delivery expense will make it feasible to use the paper container on retail routes because the higher container cost per trip of paper will be offset. This point was stated concisely a short time ago in a speech before the New York State Society of Milk Sanitarians.[7] If, the speaker (*Continued on page 162*)

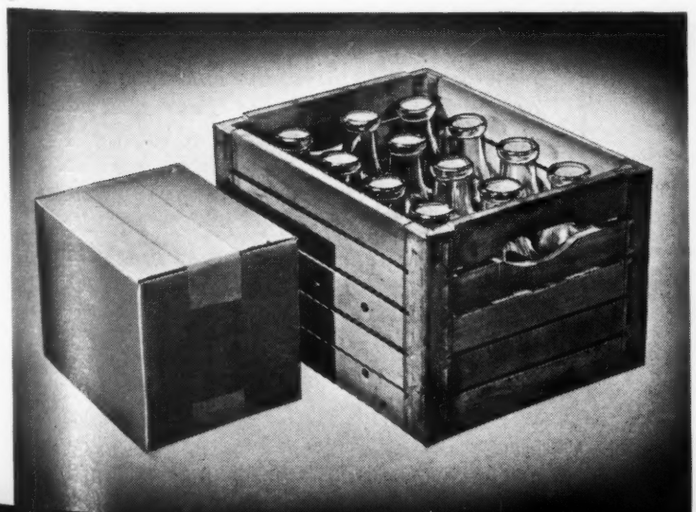
[7] Baselt, Fred C., paper delivered before New York State Society of Milk Sanitarians, New York City, Sept. 21, 1945. *The Milk Dealer*, Oct. 1945.

5—*Against a sudden shift to paper containers is the fact that the bottle filling and capping machinery in milk plants has been highly developed, is very efficient and represents a considerable investment. Photo shows the new square bottles going through one of the capping machines.*

5

6—*Delivery savings on paper result from much smaller size, 60% saving in weight for a carton of 12 paper containers of milk (left) as against the 12-quart case of glass bottles. The new square glass bottles, however, reduce the space disparity between glass and paper considerably.* **7**—*The small cartons of paper containers fit compactly in the delivery truck and require only a small amount of dry ice for refrigeration.*

6



7

1—*Profs. Rasmussen (left) and Platenius are shown in the latter's laboratory at Cornell, setting up test for oxygen transfer of a pre-packaged produce item.*

PHOTO, SCIENCE SERVICE, CORNELL UNIVERSITY

Produce pre-packaging

in New York and New England

*by M. P. Rasmussen and H. Platenius**

New York State growers and shippers have manifested an unusual degree of interest in the subject of pre-packaging[1] fresh vegetables and fruits in consumer packages. This interest seems to be based on the hope that pre-packaging of vegetables and fruits will markedly stimulate consumption of such products. Also, while opinions vary widely concerning the place at which such pre-packaging should be done, it seems clear that many growers believe such pre-packaging could and should be done at the farm or at least at country shipping points.

The interest in pre-packaging is not limited to growers and shippers. Many wholesalers and jobbers, and a substantial number of retailers, are taking an active interest in the subject, probably due to the fact that what amounts to a revolution in retailing practice has taken place during the past 10 years, in the rapid change from small, neighborhood service retail food stores to 175 self-service super-markets, both chain and independent. One national chain system established 20 self-service super-markets in 1936. Latest published figures for the same chain system in 1943 show 1,666 self-service super-markets. A New England chain system had about 120 small stores a decade ago; it now has over 100 self-service super-markets and about 12 small service stores which it is liquidating as rapidly as possible. A western New York chain, formerly all small neighborhood service stores, now has about 125 self-service super-markets only. A recent survey by *The Progressive Grocer* states that during 1945, approximately 78% of the sales of food among independent stores was in self-service and semi-self-service stores.[2]

Retailers have logically been taking advantage of the fact that the average housewife seems to prefer to serve herself, regardless of what it may cost her in extra time.

The trend has been toward packaging of all foods insofar as is possible, so as to make it easy for consumers to serve themselves. There is no obvious reason why most fresh vegetables and fruits should not be subject to this trend.

Pre-packaging is by no means new as a method of marketing vegetables and fruits. The pre-packaging of tomatoes and celery has been the function of specialized whosesalers for several decades, and many growers and shippers have successfully packaged potatoes, onions and oranges in consumer-sized lots for a number of years. It is only recently, however, that more perishable vegetables have been pre-packaged to any appreciable extent. The newer aspects of pre-packaging include the extensive use of cellulose films as a container or wrapper, the pre-packaging in small lots of nearly all kinds of vegetables and fruits, and the preparation of some vegetables by trimming, washing and slicing.

Although preliminary in nature and limited in scope to New York and the New England states, the survey reported on here is one of the best balanced studies of produce pre-packaging yet made. It will be valuable to all those interested in this growing development regardless of geographical situation. This is the first of two articles presenting the report in full.

* Professor of Marketing and Professor of Vegetable Crops, respectively, New York State College of Agriculture, Cornell University, Ithaca, N. Y.

[1] The popular term "pre-packaging" as used in this report, means the packing of a given vegetable or fruit in some sort of a container, in the size and shape suitable for consumer use without any repacking.

[2] "Food Sales Charted," *Business Week*, May 11, 1946, pp. 70 and 71.

2

3

PHOTOS, PACKAGE MACHINERY CO.

2—One impelling reason for pre-packaging is housewife's preference to serve self. Retailers find that fewer clerks are needed and check-out time is speeded up. Some say the refrigerated case is unnecessary. **3**—*This printed window wrap for salad mix rates high in eye appeal.*

Pre-packaged products, running heavily to spinach, cole slaw, tossed vegetable salad and a few diced vegetables have been observed on Eastern markets since about 1939 or 1940. It was assumed that information could be obtained from the firms which had been pre-packing these products, which might help growers, shippers and others arrive at sound conclusions concerning the desirability of engaging in pre-packaging, and the time and place that such pre-packaging should be undertaken. A brief survey was, therefore, undertaken by the authors during April 1946.

In New York and the New England states, six companies[3] were found to be engaged in commercial pre-packaging of vegetables for sale to retailers or jobbers, and none had handled any fruits. Data were obtained from five of the six firms. The firm that had the most experience in this business began operations in 1939, and the newest firm in 1944. The companies now engaged in pre-packaging in New York and the New England States were found in the following areas: Albany, N. Y.; Springfield and Revere, Mass.; Brooklyn and Manhattan, N. Y. One concern (not included in this survey) has headquarters in Providence, R. I. In addition to these, an apple shipper, reputed to have pre-packaged a considerable volume of apples, was visited in the Boston metropolitan area. Information was also obtained from two chain grocery systems in Massachusetts, one in New Jersey, and one in New York State, which have been and are now experimenting with the pre-packaging of vegetables and fruits. Some data were also obtained from officials of two chain systems, not engaged in pre-packaging, and from several members of large wholesale fruit and vegetable firms, representing various degrees of interest in the pre-packaging of fresh vegetables and fruits.

[3] All of the companies contacted in this survey were assured that information furnished would be treated confidentially; no names, therefore, are disclosed in the report.

Commercial pre-packers

In all five commercial packing houses, spinach was outstandingly the most important product handled. In four out of five of these companies, however, packing of this and other products was conducted only during the eight or nine cold months of the year — September or October through April or May — and was suspended when the weather turned warm and local produce was found difficult to handle.

As might be expected, the number of commodities handled by these five concerns varied widely, expressing primarily the judgment of the proprietors as to what might be handled most efficiently in a given area.

Firm No. 1 limited its pre-packaging to spinach, beet greens, cole slaw (of red and white cabbage), and a mixed salad called a "salad bowl." Firm No. 2 majored in spinach and also offered a tossed green salad (chicory, celery, white and red cabbage, celery cabbage, radishes, carrots and parsley, chopped and mixed), cole slaw, kale and various diced vegetables. Firm No. 3 handled a slightly wider line, again majoring in spinach, but also offering "fresh tossed salad" (lettuce, chicory, escarole, celery, carrots, etc.), cole slaw, diced carrots and turnips, chopped parsley, snap beans and chopped celery. Firm No. 4 handled a somewhat larger line, with spinach the dominant item, followed by a relatively large volume of tomatoes, celery, cole slaw (red and white cabbage), diced beets, diced carrots, mixed green peas and carrots, lima beans, escarole and endive. Most of the latter are chopped up and put out in the form of a vegetable salad. Firm No. 5 attempts to conduct a year-around business and handles the widest line of all five firms, but operations during the warm summer months are usually at a relatively low rate, due to the difficulty of handling nearby produce, unstandardized both as to weight and variety, and from which field heat is not ordinarily removed by

PHOTO, GREAT ATLANTIC AND PACIFIC TEA CO.

4—Mixed vegetables for salad packaged whole, for better preservation, is idea introduced by A & P in Columbus.

precooling. This concern handled a large volume of pre-packaged spinach, as well as dandelions, beet greens, salad mixes, tossed salad, cole slaw, soup bunches, lettuce, green beans, carrots, cauliflower, broccoli, shelled green peas, husked sweet corn, mixed green peas, green beans and carrots, fall squash and popcorn.

All five concerns seemed to consider themselves pioneers in a field the future of which was somewhat uncertain, and one in which they were feeling their way. Most of the operators seemed to feel that the demand for pre-packaged vegetables was influenced to a considerable degree by current high wages of urban workers and the relative scarcity of other commodities such as automobiles, refrigerators, clothing, housing and the like, for which such surplus funds might otherwise have been spent. They were, naturally, concerned with the probable effect on their business of a decrease in employment or wages, or both.

Volume of produce handled—Most of these commercial pre-packing concerns are, as yet, of relatively small size and reflect the fact that pre-packaging is a highly personalized business, requiring very close supervision. The total volume of business handled per firm would naturally vary, but on the basis of estimates supplied by operators and observations of the authors, it is believed that three of the five firms would not exceed 8 to 16 carloads of raw unprocessed vegetables per week for 8 months of the year, while the remaining two might average 10 to 20 carloads per week.

It is difficult to arrive at accurate comparisons of the quantities of any vegetable which were pre-packaged in comparison with quantities sold in original form. In the first place, information on quantities of vegetables and fruits received and unloaded at a given market annually (via rail, boat and motortruck) are not available for several of the markets in which these packers are situated. Secondly, these pre-packers characteristically distribute their products over greatly varying areas. One pre-packer ships spinach regularly at least 275 to 300 miles from the pre-packaging point, while two others limit their operations to outlets within 25 miles of the pre-packaging point.

Some rough estimates can be made of packaged versus unpackaged vegetables by comparing the estimated volume of spinach (the most widely pre-packaged vegetable) with total reported unloads of this product in the New York metropolitan market, where relatively complete unload information is available.

It is estimated by the authors that approximately 450 carloads of spinach were used in the New York metropolitan area during the 8-month period October 1945, through May 1946.[4] An average of about 2,880 carloads of spinach have been unloaded in the New York City market during these eight months during the past four years. Pre-packaged spinach in the New York metropolitan area is, therefore, estimated to account for about 16 % of the total quantities of spinach sold in the New York area during the eight-month period from October 1945, through May 1946. However, total receipts of spinach in the New York metropolitan market have averaged about 4,218 carloads *annually* during the past four years. The pre-packaged percentage of total receipts would, therefore, represent about 11%, or about one carload in ten.

Estimate of investments—Four out of the five pre-packaging concerns studied were located in old buildings which had not been constructed for the specific purpose of packaging vegetables or fruits. The fifth was operating in a relatively new and substantial building, but this building likewise had not been specifically erected for the purpose.

All of the pre-packing concerns had relatively large, bulky, though not particularly complicated equipment for sorting, washing and cleaning spinach, but in all cases, the weighing and packaging of spinach was done by hand. The need for an automatic machine which would do a good job of drying, weighing and packaging spinach was frequently referred to.

Several of the commercial packaging companies had automatic sealing machines which were used to wrap most products except spinach and beet greens, in a cellophane wrapper or bag, the contents of which had first been weighed out manually and placed in a cardboard boat or container. Here again, the weighing was not automatic, but was done by the attendants who pushed the filled containers towards the packaging machine.

The range in equipment used by these firms was so diverse that only the roughest approximations can be made as to the investment which might be necessary if a group of growers or shippers considered it advisable to enter this field. It seems likely that no firm could handle a volume similar to the five firms studied without an investment of from $25,000 to $50,000 in washing, drying and packing equipment, refrigerator boxes, and the like. It may be possible to rent suitable buildings. If not, the investment of $25,000 to $50,000 would probably be required for buildings alone. If delivery trucks are to be owned, it is obvious that substantial sums might be tied up in such equipment.

[4] According to the United States Dept. of Agriculture, the average carload of spinach consists of 800 bushels, weighing about 18 lbs. each.

Methods of distribution and delivery—As might be expected, methods of distribution were tailored to the individual ideas of the owner of the business as well as to local conditions. One packer sells most of his production to four or five chain-store systems and delivers most of it in his own trucks. Another packer delivers only local sales by motor truck and uses railroad express service exclusively for out-of-town sales. This packer reports about half of his sales to chain-store systems and half through fresh fruit and vegetable wholesaler-jobbers. A third packer sells to chain stores (to which deliveries are made via hired truck service) and to mobile jobbers who operate their own or hired trucks and literally peddle the pre-packaged produce from one independent store to another. Another packer likewise deals with both chain stores and the jobbing trade. A delivered price is usually quoted and trucking is hired on a contract basis to distances of about 100 miles. Still another packer owns a substantial fleet of trucks for deliveries locally and in a 50- to 75-mile area. Deliveries are made to both chain and independent retailers, but are very closely supervised. Care is taken not to oversupply any retailer, so that each store only gets what it can sell daily. This packer also maintains a large, artificially refrigerated sales cabinet in a retail store where public reactions to and demand for its products can be gauged with considerable accuracy. One of these pre-packing concerns has established one branch pre-packing plant about 135 miles from the parent plant and plans to set one up at another point about 350 miles distant. This firm seems to believe hauls of 150 to 175 miles are long enough for the pre-packaging business.

Refrigeration—There are many diverse opinions concerning the desirability of better preservation of pre-packaged products all along the line from packer to consumer. Not all individuals surveyed in this study were of the opinion that substantial investments in refrigerated motortrucks, warehouses and retail stores were warranted. Some retailers believe that pre-packaged vegetables and fruits should only be supplied to retail stores in such quantities as can be disposed of within a few hours and prefer frequent servicing to investment in relatively expensive self-service refrigeration cabinets.

It is probably fair to state, however, that most of the commercial pre-packers anticipate that important advances will be made in the near future in the way of refrigeration and that these packers believe consumption of fresh vegetables and fruits will increase substantially because of the better preservation of the product. One pre-packer estimated that less than 1% of the retail food stores now have self-service refrigerator cases for vegetables and fruits. Two of the five commercial pre-packaging companies were sufficiently interested in the possibilities that better refrigeration and display might increase consumption of more vegetables and fruits that they have ordered a number of self-service refrigerator display cases (to cost about $900 each) which are to be placed in selected retail stores on lease to the retailer. It will readily be appreciated that any expansion of a program of supplying retail stores with refrigerated cases on any large scale would require a relatively large investment by the pre-packaging organizations.

Pre-packaging by retailers

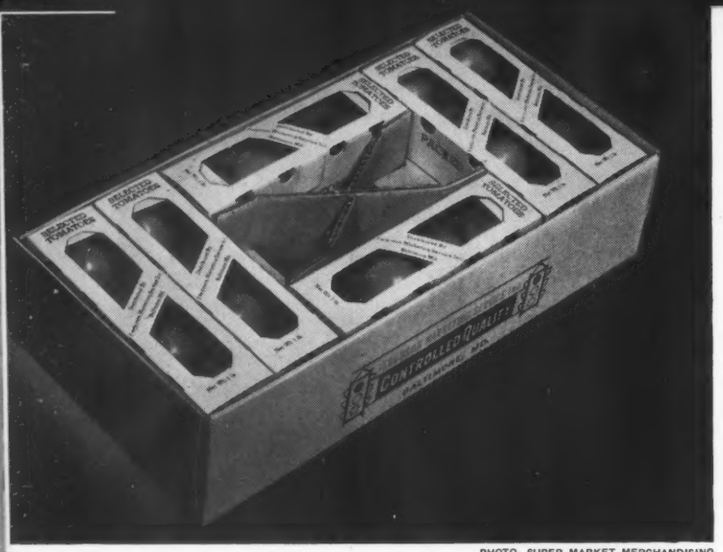
At least four large Eastern chain store systems are engaged in what is frankly called "experimental" pre-packaging. No two of these chains is proceeding along identical lines. Three of the four are proceeding on the assumption that, to be successful, the pre-packaged product must sell for the same price as the unpre-packaged product would normally bring.

One of these three chains is limiting its experiment to pre-packaging all sorts of vegetables and fruits in its produce warehouse for sale in *one* super-market unit only. To date, it is reported that sales have doubled, though comparative cost data are not available. In this super-market, self-service refrigerator cases are used to sell in season pre-packaged fruits or vegetables as follows: apples, strawberries, grapes, pears, lemons, cauliflower, peppers, carrots, snap beans, rhubarb, beets, broccoli, chicory, sweet potatoes, parsnips, radishes, peas, mushrooms, turnips, celery, lettuce and beet greens. In season for the different products, something like 3,500 packages have been sold per week in this store. Products like spinach, vegetable salad, cole slaw, etc., are *purchased* from commercial pre-packers. This organization has an automatic wrapping machine.

Another chain system is running a combination of produce warehouse and super-market experiment. A small, compact processing unit, including an automatic wrapping machine, is operated in the produce warehouse. This is supplemented by a small, on-the-spot, manual packaging room at *one* of the super-market stores, although some 15 or 20 super-markets are

5—*Packaged strawberries in display shipping case. Printed, ventilated boxes are wrapped in transparent film.*

PHOTO, SUPER MARKET MERCHANDISING



PHOTO, SUPER MARKET MERCHANDISING

6—Tomatoes in units of three and four are volume packaged item—an effective shipping and merchandising pack.

being utilized in the experiment. Limited cooler space is available in the produce warehouse as well as in each super-market where the project is being tried.

The research staff in this chain is not convinced that refrigeration in the super-market is necessary for successful selling of pre-packaged vegetables and fruits. They have been pre-packaging some products, such as lettuce, for over 5 years. From their experiences they find that pre-packed vegetables and fruits, displayed on non-refrigerated racks, hold up amazingly well, and almost as well as with refrigeration. They believe that much of the benefit derives from merely paying close attention to the product. It should be noted, however, that this chain makes five deliveries of pre-packaged products per week to each store, in addition to such pre-packaging as may be done adjacent to the store itself.

In this chain, likewise, there was an expectancy that the number of store clerks could be reduced through pre-packaging, and also that time spent in line waiting to check out or pass cashiers in super-markets would be lessened through ease of handling. This chain did not plan to continue the experiment during the summer months because of difficulties encountered in handling *locally grown* produce, though some limited experiments might be tried on cabbage. In the opinion of the research staff of this chain, the big problem was to develop the right package. In common with all other pre-packers, a high premium was placed on visibility, and current packages were criticized because the sides were too high and cut down the visible areas of the produce pre-packaged. This chain will probably develop, as soon as possible, a fleet of mechanically refrigerated and insulated motortrucks to deliver pre-packaged and other products which require low temperature.

A third chain store system is likewise frankly experimenting with pre-packaging of vegetables and and fruits to see what will happen to sales and also what economies may result, both in the produce warehouse as well as in super-markets themselves. A modern packaging machine is used and a relatively large number of different vegetables and fruits have been packaged. It is noteworthy, however, that this chain also has not embarked on the pre-packaging of spinach, cole slaw or tossed salad, but purchases its requirements of these products from commercial repackers of same. This chain is running experiments in three large super-markets, chosen with regard to income area. All stores have refrigerated display cases. If successful, this chain will probably air-condition a substantial part of its produce warehouse, install such refrigeration as may be needed and attempt to serve pre-packaged produce, via refrigerated and insulated trucks, to a large number of super-markets.

The officials of the fourth chain spent considerable time investigating experiments by other pre-packers before they set up their own series of trials, which began in December 1945. At present, experimental activities are restricted to two large super-markets — one in a high-income neighborhood and one in a medium-income neighborhood. Open-refrigerated cases are available in each store, but not all perishables are placed in these cases. Some are placed on simple trays filled with crushed ice. All pre-packaging is done manually by small groups of employees (4 to 5 in number), who pre-package the products in accordance with the need of the store. Careful records have been kept of costs of packing, including containers and operation, as well as excellent records concerning spoilage incurred. Some interesting experiences (some of which do not coincide with orthodox thinking) have already turned up. This experiment will run through the year, and should result in much worthwhile information.

Officials of two large chain store systems which were *not* engaged in any pre-packing experiments were also interviewed regarding the possibilities of pre-packaging. One official, in charge of about 350 stores (approximately 60% super-markets) did not expect to do any experimenting along the pre-packaging line, and was frankly skeptical of the desirability of doing so or the results that might be attained. This official was firmly of the opinion that it was a matter of relative costs, that it would not be possible to sell pre-packaged at the same price as non-pre-packaged goods, and that only a small proportion of customers (i.e., those in the higher income brackets) would be able to pay the higher prices necessary. This chain was handling pre-packed spinach, cole slaw and tossed salad in its stores, but these were all supplied by commercial pre-packers. No startling changes had been observed in sales of the pre-packaged versus unpre-packaged, which may have been due to the fact that the pre-packaged products retailed for more than unprocessed products. For example, on April 1, 1946, this chain offered 10 ozs. of washed spinach in cellophane bags for 19 cents, and 2 lbs. of unwashed bulk spinach for 15 cents. On April 26, the washed, cellophane-packed spinach sold at 10 ozs. for 19 cents, and

the unwashed bulk spinach sold at 2 lbs. for 17 cents. This chain has handled pre-packaged washed spinach, diced vegetables and a salad mix since December 1941. In view of the doubts expressed by the commercial pre-packers of the economic possibility of pre-packaging locally grown produce, it may be of interest to note the dates each season when this chain system began to handle washed spinach, and likewise when it ceased handling it. For each season, from 1941 to date, the records show the following:

	Season during which washed pre-packaged spinach was offered for sale	
Season	*First sale*	*Last sale*
1941–42	December 1, 1941	April 15, 1942
1942–43	November 2, 1942	May 1, 1943
1943–44	October 22, 1943	May 3, 1944
1944–45	October 16, 1944	March 31, 1945
1945–46	October 17, 1945	May 22, 1946

During these same seasons, prices obtained for unwashed and washed pre-packaged spinach averaged as follows:

	Prices charged for each kind of spinach in retail stores		
		Unwashed spinach	
Season	*Washed spinach in cellophane bags*	*Bulk as sold in store*	*Comparable price per pound for raw spinach if processed**
	Cents per 10-oz. package	*Cents per lb.*	*Cents per lb.*
1941–42	12.6	6.8	10.2
1942–43	18.9	11.1	16.6
1943–44	20.4	10.1	15.1
1944–45	21.2	11.3	16.9
1945–46	20.3	10.2	15.3
Average, 5 seasons	18.7	9.9	14.8

* Assuming that it would take 1½ lbs. of unprocessed spinach to result in a product similar to that sold in 10-oz. bags by pre-packers, after removing stems and brown leaves, washing and drying. This price does *not* include the cost of processing, or of the cellophane package, delivery, credit, etc.

From the foregoing, it will be noted that the raw material which was retailed as washed spinach, in cellophane bags, ready for cooking, cost approximately 15 cents per lb. in comparison with 10 cents per lb. for unwashed bulk spinach, as it came directly from the bushel baskets as packed by growers and shippers. The average cost to consumers per pound of washed spinach, in cellophane bags, was about 29 cents. This, of course, includes the cost of cellophane bag, cost of processing, delivery, credit, retail markup, etc.[5] The pre-packaged spinach is probably sorted more thoroughly than the average housewife would do, and consequently the volume resulting from the commercial processing of a pound of spinach is considerably less.

[5] The average quoted price for 5 seasons was 18.7 cents for 10 ozs., or 1.87 cents per oz. On a per-lb. basis this would equal the following: 16 ozs. × 1.87 cents = 28.9 cents per lb.

The label used by one commercial packer carries the statement that the 10-oz. package of washed spinach is "equivalent to approximately 1½ lbs. in bulk." The label of another packer states that the 10-oz. package of washed spinach is "equivalent to approximately ½-peck in bulk." Taking the first statement as an example, it appears that it takes 24 ozs. of bulk spinach to produce 10 ozs. of washed and packaged spinach, which amounts to a loss in volume of abqut 58%. The amount of shrinkage that results from repackaging spinach depends to a large extent on the original quality of the spinach, and may vary from 40 to 70%.

The second chain store likewise handles pre-packaged spinach, cole slaw, tossed salad and diced vegetables in its stores, a large number of which are super-markets, located in medium to high-income areas. In one store, in a medium to high-income neighborhood, the manager of the store reported average daily sales of 3 doz. packages of pre-packaged cellophane-wrapped spinach (total 360 ozs. net, but representing the equivalent of about 54 lbs. of bulk spinach) in comparison with sales of 5 bushels of bulk spinach (90 lbs.) daily. In other words, out of the *equivalent* of about 144 lbs. of bulk spinach sold daily, about 37% was washed, pre-packaged spinach, and 63% was unwashed bulk spinach. In this store, pre-packaged spinach brought 21 cents for 10 ozs., while bulk spinach sold for 2 lbs. for 19 cents.

Attitude of wholesalers

In the limited time available for this survey, only five wholesale firms could be interviewed on the subject of pre-packaging. Only one of these firms has had any experience in pre-packaging, and that had been limited to putting up from 600 to 900 doz. packages monthly of mixed salad (consisting of celery, chinese cabbage, white and red cabbage, carrots, radishes, escarole and chicory) during the cold months of the year. This firm found that consumer price resistance developed rapidly at any price above 19 cents per 8-oz. package of salad. The firm has full intentions of going into pre-packaging, which will consist largely of celery and tomatoes. Their experience indicates that they have not yet found a satisfactory package, and that heat-sealing tends to brown or burn the products in the package.

One large wholesale firm is so interested in pre-packaging that it has engaged the services of a produce man who has had considerable experience in pre-packaging vegetables both at country and city points. The staff of this wholesale organization, which consists of men with wide experience and of high standing in the produce trade, is firmly of the opinion that the bulk of fruits and vegetables will continue to be sold in fresh form and not frozen or canned. The members of this firm likewise believe that pre-packaging will experience a slow, steady growth, and that the handling and merchandising of pre-packaged vegetables and fruits under a definite brand is a logical part of the services which such a firm should perform. At present, activities are limited to tomato packaging, but

plans are in the making for substantial expansion into the pre-packaging of perishable vegetables and fruits when suitable wrapping film, containers and machinery are available.

The management of the three other wholesale firms all gave evidence of keen interest in the present status of pre-packaging, but none of them had any definite plans for entering the pre-packaging field. All three firms recognized the potential possibilities of pre-packaging of perishables, but all three firms seemed to prefer to sell in wholesale quantities to pre-packers rather than go into the pre-packaging business directly. It is probably a fair appraisal of the attitude of these firms to state that they regard pre-packaging as a highly specialized job, for concerns which have nothing else to do, and that they have some doubts that wholesale market firms can successfully engage in such an activity. The difficulties inherent in credit extension to retailers, of maintenance of refrigerated motortrucks, and of possible financing and leasing refrigerator display cases to retailers, as well as the establishment and maintenance of substantial refrigerator space in the wholesale warehouses—all of these factors were regarded as difficult problems, which would make them question the advisability of entering the pre-packaging field.

(A second and concluding article, covering the technical aspects of produce pre-packaging and presenting a summary and conclusions, will appear in the August issue.)

Housewives prefer pre-packaging, 9 to 1

Housewives are overwhelmingly in favor of the pre-packaged merchandising of fruits and vegetables, according to a survey reported by Prof. Charles W. Hauck of Ohio State University in a bulletin of the Ohio Agricultural Experiment Station.

Purpose of the survey was to determine whether the housewife, in actual practice, would prefer self-service buying of trimmed and prepared fruits and vegetables, wrapped in cellophane and refrigerated, to the traditional "bulk" buying methods.

"An overwhelming majority, about nine in ten, after varying periods of experience with pre-packaged produce, stated that they preferred to buy fresh fruits and vegetables this way rather than in bulk," Prof. Hauck reported.

PHOTO, GREAT ATLANTIC & PACIFIC TEA CO.

Prof. Charles W. Hauck (left) examining packages from conveyor belt in A & P's Columbus warehouse with R. S. Grant, Food Machinery Corp.

Nearly 500 patrons of five retail stores in Columbus were questioned as part of a research project which has attracted nationwide attention since it began early last year.* Rural economists of Ohio State University and the Ohio Agricultural Experiment Station, with the collaboration of the Great Atlantic & Pacific Tea Co., are carrying on the research with the objectives of reducing the present large wastes and losses in distribution of fresh fruits and vegetables, encouraging marketing of properly matured produce and prolonging the freshness of such produce.

According to Prof. Hauck, consumers offered attractiveness of the pre-packaged displays of fruit and vegetables and high quality of produce as the main reasons for preferring this method of merchandising. He said that sanitation ranked almost equal in importance as a buying motive, and that patrons also liked the speed and ease with which they could make their selections.

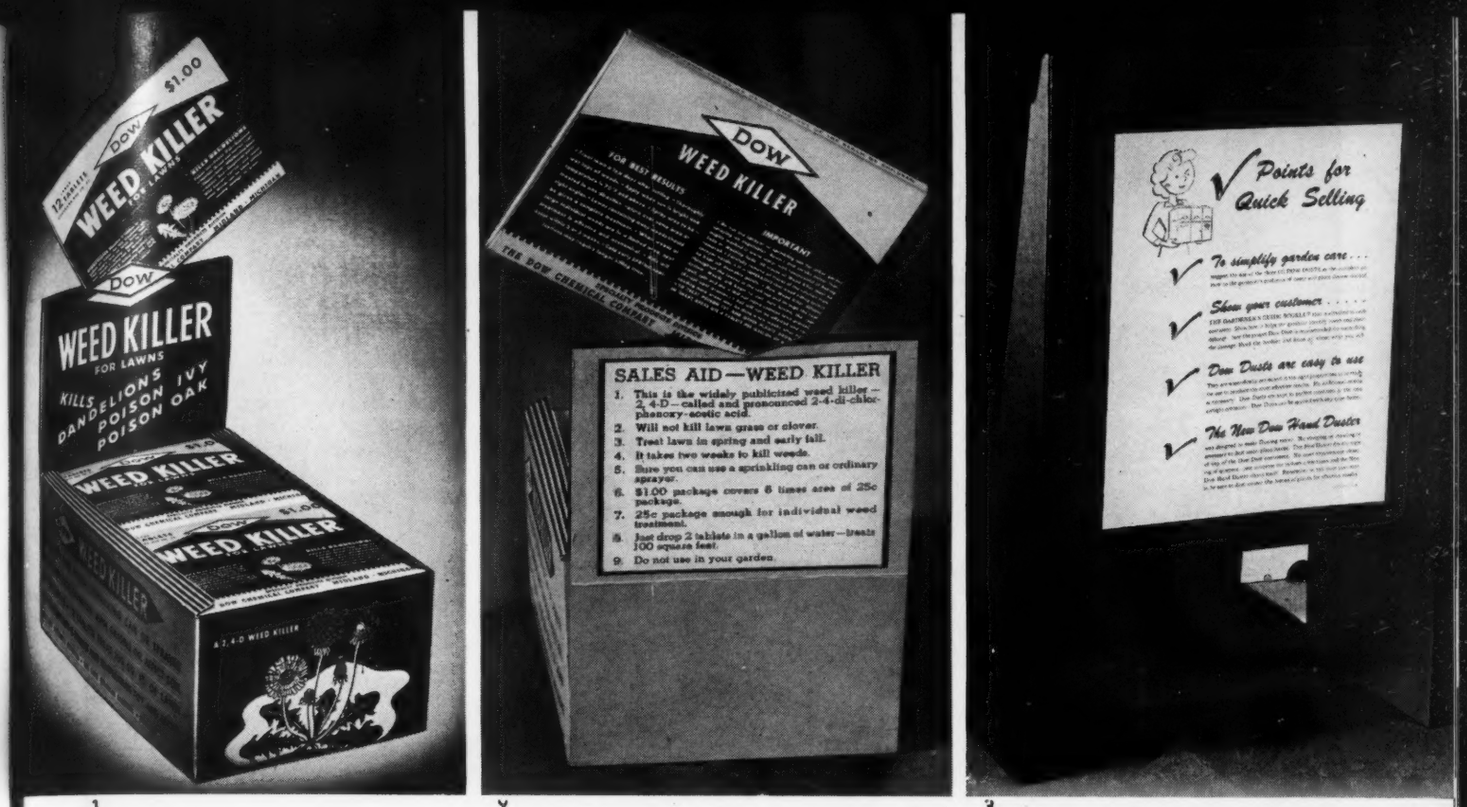
Other consumer advantages listed by the housewives were convenience of handling the packaged produce in the store, in the household refrigerator and in the kitchen, as well as simplification of waste or garbage disposal. Longer life of the produce after purchase also was considered an important factor.

Professor Hauck said that most of the extra costs for the retailer involved in pre-packaging of the foods were met by savings at various points, by extension of the "shelf-life" of the perishables, and by increases in sales volume.

"This result has been obtained without advancing the retail price of the packaged items over that of identical goods sold from bulk," he said.

---

* See "Packaged Produce . . . the Columbus Experiment," MODERN PACKAGING, July 1945, pp. 89–95.


DOW
WEED KILLER
$1.00
FOR LAWNS
KILLS DANDELIONS
POISON IVY
POISON OAK
SALES AID—WEED KILLER
1. This is the widely publicized weed killer—2, 4-D—called and pronounced 2-4-di-chlor-phenoxy-acetic acid.
2. Will not kill lawn grass or clover.
3. Treat lawn in spring and early fall.
4. It takes two weeks to kill weeds.
5. Sure you can use a sprinkling can or ordinary sprayer.
6. $1.00 package covers 5 times area of 25c package.
7. 25c package enough for individual weed treatment.
8. Just drop 2 tablets in a gallon of water—treats 100 square feet.
9. Do not use in your garden.
Points for Quick Selling
To simplify garden care . . .
Show your customer . . .
Dow Dusts are easy to use
The New Dow Hand Duster

1 2 3

1—Customer's view of Dow's Weed Killer carton. 2—As the clerk sees it. Since this is a new product, nine most frequently asked questions are answered. 3—Selling points are listed on back of insecticide display.

Help! . . . *for the clerk at the point of sale*

The story is told of the clerk in the men's furnishings store who, when asked why one brand of shirt cost half a dollar more than another, came up with the reply, "Well, if the X Company wouldn't spend so much money on advertising they wouldn't have to charge so much for their shirts."

The sad part of it was that while the X Company's shirts had unusual features well worth the slightly higher price, they had failed to call those features to the attention of the clerk adequately.

Alert manufacturers today are becoming acutely aware of the value of product knowledge *at the point of sale.* They realize that no clerk in the average modern store can possibly have full knowledge of all the products he handles daily. But they also realize that the better his knowledge, the better his ability to sell.

The package long ago ceased to be a mere *container* and became an active selling mechanism, appealing to the eye of the prospective purchaser, in some cases permitting his visual inspection of the product, pointing out distinctive features or giving directions for use. But shoppers characteristically like to ask questions, and psychologically vague or evasive answers tend to discourage purchase while one or two direct, informative answers are usually sufficient to clinch a sale.

These points hold true especially in the presentation of a new product to the public. And since new products of the small package variety are frequently put up in counter display cartons to lend additional selling punch, the display carton itself can readily be used as a means of educating the store clerk.

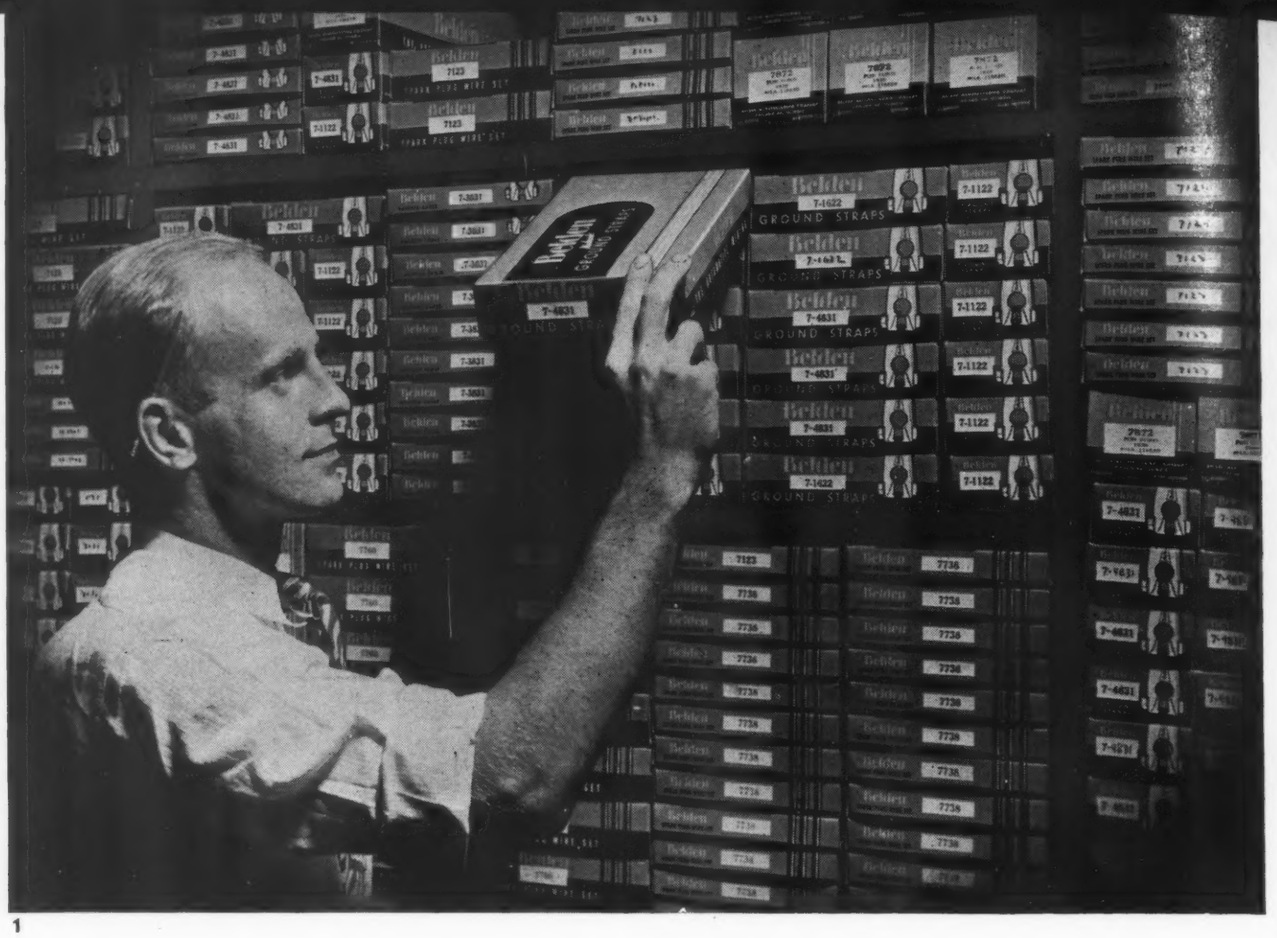
The backs of such counter display cartons, which are customarily blank or devoted to instructions regarding the carton itself, are a logical location for selling points or answers to typical customer questions.

This idea has been utilized effectively by the Specialty Products Division of The Dow Chemical Co. in presenting such new items as its chemical weed killer and a kit of garden insecticides. In the latter case definite selling points are briefly mentioned, while in the former, since this is an entirely new product, answers to nine most frequently asked questions are noted in relatively large type.

Use of such a device makes the counter display carton a complete selling unit, for in addition to providing eye appeal or attraction value and accessibility, it also provides clerk knowledge at the point of sale.

It is almost axiomatic that the average clerk or salesman likes to sell best the products he knows best.

CREDITS: *Foil packets for Weed Killer, The Dobeckmun Co., Cleveland, O.; display cartons, Container Corp. of America, Chicago. Rack for insecticides, Magill-Weinsheimer Co., Chicago.*



1

1—*The electrical jobber's standard stock bin is 35 in. wide. The new Belden boxes are carefully calculated in multiples of width to fill this shelf space exactly, eliminating an average waste of 25 to 30%.*

Bin size . . . for the jobber's convenience

Consider the multiplicity of electrical components that must be stocked by dealers in radio and automotive parts or electrical replacement items, such as heater cords, switches and sockets, and you get a fair idea of the problem which also confronts jobbers serving these respective fields. The large number of individual parts involved, ranging in size from tiny terminals and fittings to such items as battery cables, makes it imperative that the jobber institute the most efficient possible stock handling methods, in order to move merchandise to his retailer customers without delay or duplication of effort.

The fact that jobbers in these lines had generally adopted standard bins with shelves measuring approximately 12 in. deep and 35 in. wide was a step in the right direction, but the complaint persisted among jobbers that they needed additional space for stock. Under the direction of Les A. Thayer, merchandise division sales manager, the Belden Manufacturing Co. of Chicago, one of the nation's largest suppliers of automotive, radio and home appliance wire and wiring equipment, made a study of this situation and found that 25 to 30% of the typical jobber's available shelf space was being wasted because of the heterogeneous range of package sizes carried in stock.

Belden's answer to this universal problem was the development of a standardized line of unit packages for all three merchandise groups which enabled the company to effect a reduction of more than 50% in the number of package sizes required and gives both the jobber and retailer a neat, compactly stocked bin that eliminates wasted storage space and helps do a better job of merchandising. The new cartons in the automotive line are now being shipped, and the radio line will be in general use sometime this summer. By the end of the year, the complete repackaging program will be in full swing.

The new Belden family of folding boxes is designed with orange printing on a blue and white background, reversing the color combination formerly used. The Belden name appears prominently on the top and front of each carton, permitting easy brand identification.

Each package also carries an ample blank "window" on the end in which a large trade number and an exact description of the contents are inserted by the company, as required, with a multigraph machine. Of stapled construction for added strength, the boxes are set up in the Belden plant, affording close control of carton inventory. Some carry large drawings showing the type of product contained and in certain instances additional illustrations and copy, showing how to use the item or listing the types and sizes required for different applications, are included. The designs were worked out by Belden's own staff. All cartons are varnished to help preserve the printing and eliminate finger marks.

Radio jobbers who examined the new Belden packages on display at the 1946 Radio Parts Show in Chicago were enthusiastic over what this family container group could do to bring about more efficient operations. Most jobbers recognize that with numerous unseen costs creeping into today's business operations, the steps involved in getting merchandise from their own shelves to those of the dealer must be cut to a minimum. Such activities as unreeling 25 or 30 ft. of cable, then measuring, cutting and wrapping it are time-consuming and tend to reduce the jobber's ultimate net. Anything which more intelligent packaging can do to speed up the movement of the merchandise is bound to receive a warm welcome from the trade, as the Belden firm quickly learned.

The fundamental secret of the new Belden packaging program is that all containers are related in size so that they "square up" and fill the shelves. Assorted small and large packages may be arranged in the bin in any manner which the jobber elects; regardless of the arrangement, they will always come out even with no waste of shelf space. The advantage of such an arrangement from the standpoint of merchandising appeal, as well as that of rapid selection of the desired items, is readily apparent in the accompanying photographs. The factor of package height is not controlled as are the other dimensions, since the bin shelves are adjustable vertically and may be changed by the jobber.

In the Belden line of radio parts, eight basic packages are utilized to contain approximately 1,000 different items. A few of the representative products in this group include microphone cable, antenna wire, hook-up wires (some 600 varieties), terminals, antenna kits and transmission cables. For dealers whose complete requirements cannot be filled with the shorter packaged lengths, there are some bulk put-ups of various types of wiring on supply spools. A similar approach is being followed in the firm's electrical replacement items.

H. W. Clough, vice-president of Belden Manufacturing Co., has this to say about the development of the unit packaging system for the automotive line:

"Before installation of this system, most of our products reached jobbers and retailers in bulk form in large shipping cartons. For the relatively few items that did receive unit packaging, we used about 15 different box sizes. There was no planned relationship among them as to shape and size. Because of this fact, they did not

2—*Varying sizes of box for electrical cord can be stacked without waste space. Stock number and product description are imprinted in white panel by multigraph.*

2

3

3—*There is no surer identification than a glimpse of the product itself. Assortment setup for radio wire serves the triple purpose of counter display, group selling and dispenser package.*

lend themselves well to a neat, efficient arrangement for storage in bins. Other suppliers throughout the country faced the same problem.

"The system we devised, with the aid of packaging experts of a folding paper box manufacturer, helps the jobber as well as the retailer. We have reduced the number of box sizes to nine. All the containers are of the two-piece folding box type, the widest measuring $6^{7}/_{8}$ in. and the longest, or deepest, $11^{3}/_{4}$ in. The nine different box sizes were so designed that various combinations of them would form a compact nest not exceeding the width and length of the largest boxes. Thus, five nests will fit nicely in the width of a bin.

"We make 197 articles in our automotive line, but just take ground straps for an example. Before we switched to unit packaging, we simply placed a quantity of unpackaged ground straps in a shipping carton and sent them to the jobber. When he received an order for, say, 100 straps, he had to count them out laboriously, then pack them in another carton. Now we package ten ground straps in each box and ten boxes to a carton. All the jobber must do to fill an order for 100 straps is to relay the carton just as it reached him. Any other quantity is almost as easy to handle; it is much simpler to count out a few boxes than ten times as many individual loose straps.

"This multiple unit shipping of boxes effects a great saving in warehouse space. It gives a jobber 25% more inventory in the same space required for storing merchandise under the old system. Therefore it reduces the rent charged to a particular line.

"The same benefits accrue to the retailer, of course, but even more important to him are these results: Improved protection of merchandise, easier, more orderly and attractive storage in bins, greatly increased display opportunities with branded merchandise easily identified—all of which adds up inevitably to increased sales and greater customer satisfaction."

Mr. Clough stresses particularly the display advantage of products in the new unit packages. "Under the old system," he points out, "unpackaged articles were tossed into bins in more or less haphazard fashion. Certainly there was no effort to focus a customer's attention on them. For the most part, they were just nameless gadgets.

"Now the merchandise can be stacked neatly in bins as well as displayed attractively on counters. The customer's interest can be directed to it. The impact of well displayed, branded merchandise is bound to produce results. It creates the desire to buy. Casual customers of a store become loyal patrons when they see the merchant maintains a full line of well known brands and keeps his stock well organized to give better service."

In order to introduce the new standardized packaging system to jobbers and dealers handling its automotive products, the Belden company prepared a sample bin stocked with the redesigned line of packages and has displayed it on several occasions at trade shows, sales meetings and similar gatherings.

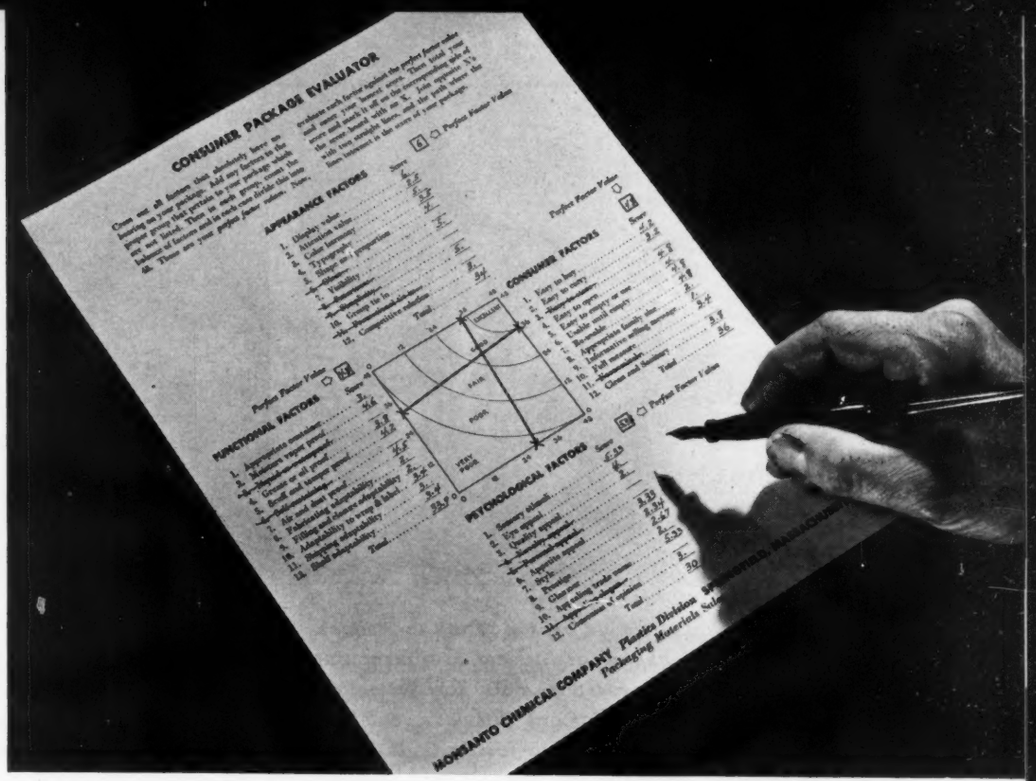
CREDIT: *Folding paper boxes by Acme Paper Box Co., Chicago.*

4—*Eight different sizes of folding boxes from automotive wiring line are represented. Complete standardization has reduced more than half the number of package sizes.*

4

5—*Clear-cut identification of the product on end panel, supplemented in some instances by an illustration of the product, facilitates rapid, accurate order assembly.*

5



1—*How good is your package? Rate applicable factors against the "perfect" factor, plot the four resulting totals on graph in center, connect the points, and the resulting intersection will show just how your package rates in sales performance.*

Package evaluator . . . for graphic analysis

*by Ralph F. Hansen**

In a recently published report of his study of Americans, Hans Bendix, a war-time refugee, said, "Packaging in America is an art with liabilities. The people (consumers) are prone to be charmed with the package and disregard the contents."

To a certain extent this may be true, but has Mr. Bendix given any thought to why people in America take so many products in packages for granted? Perhaps it's for the same reason people buy automobiles without lifting the hood to see the engine. This is the result of business on a free competitive basis which has created a high standard of living, and which in turn means a high standard of products of all types.

Much of this competition reaches the retail counter in the form of a package, each package vying with its competitive counterpart to catch the roving consumer's eye, to remind her of some one advertisement, to stimulate that impulse, and create that desire to buy, and buy with confidence.

Hence, it is axiomatic that when a consumer product is to be packaged, it should be packaged to sell as well as to protect the contents.

To classify a selling package, four major groups of factors must, in our opinion, be considered. These are (1) *appearance factors*, (2) *functional factors*, (3) *consumer factors* and (4) *psychological factors*. There are packages that stress appearance factors, but disregard the psychological points. Too, there are packages that are excellent from a functional standpoint, but lack some consumer requisites, or vice versa.

A "Package Evaluator," a simple score sheet by means of which the packager may rate his own package on each of these points and arrive at a fair estimate of its worth, has been devised by Monsanto and tested over the last several months. It has proved helpful to several packagers and is available to all those interested.[1]

The Package Evaluator (Fig. 1) aids in getting a proper balance of the four major groups. It will also indicate where a package is weak and where it could be strengthened. It can be used in designing a new package, or appraising an old one. However, it does not altogether imply that the higher the rating, the better selling package it is, for today, even a poorly designed package can be sold to the public by consistent advertising or sales promotion; or by demand being greater than the supply; or some other merchandising principle of an abnormal nature. But we've relied on the abnormal too long.

With the supposition that a buyers' market will eventually be here and selling techniques in all their ramifications will take the place of apologetic allocations, the package must be considered as a principle tool in any selling program.

Call in a designer or someone with a knowledge of

* Packaging Material Sales Dept., Monsanto Chemical Co., Springfield, Mass.

[1] Copies of the Package Evaluator may be obtained from the Plastics Division, Packaging Materials Sales Dept., Monsanto Chemical Co.

2—*Square milk container should get top rating for "shape and proportion," while cheese assortment in transparent box would score highest possible mark for "attention value" and "visibility." National Biscuit's familiar tradename is an excellent "group or family tie-in," and I-H is outstanding example of "promotional tie-in."*

3—*Coca-Cola rates near-perfect score under "easy to carry." Pouring spout gives salt package perfect value score for "easy to empty or use." Few "informative selling messages" are as complete as Chase & Sanborn's. Deserving a top mark in "re-usable" container class is the molded plastic Easter egg as a package for candy.*

packaging materials and check the requirements needed under the four major groups. Representatives of fabricating and automatic wrapping equipment will also be glad to furnish information under the functional factors. It does not necessarily hold true that the more factors a package has the better it will be, but it does hold true that each factor should be of the best and the package should try to reach the Perfect Factor Value ascertained in each group.

After the sample or mock-up package has been made, you are ready to evaluate by following the directions. In evaluating a finished package, the same procedure is followed.

By way of explanation, let us consider the following. Under the *appearance* group you may decide to eliminate four factors—Nos. 6, 8, 9 and 11, each of which, you'll say, has absolutely no bearing on your package. This leaves a balance of eight factors in this group each of which must be scored against the Perfect Factor Value with the assumption the latter is perfection or 100%. This Perfect Factor Value is simply arrived at by dividing the balance of factors, eight, into 48, which equals six. (Other factors not listed may be added before dividing.) Then six is your Perfect Factor Value in the *appearance* group. Jot it down in the square so indicated and follow the same procedure with the other groups, always dividing the factors you intend to use into 48.

After all four of the Perfect Factor Values have been ascertained and jotted down in the square so indicated, you are then ready to score and chart the value of your package.

Starting with the *appearance* group evaluate number one—Display Value—from this viewpoint—"Does the package lend itself to display on the retail counter, aisle, or window? Will the retailer place it there without any coaching or inducements?" If it has this outstanding value give it the Perfect Factor Value score of six. If it has only a fair display value, give it a score of three or four.

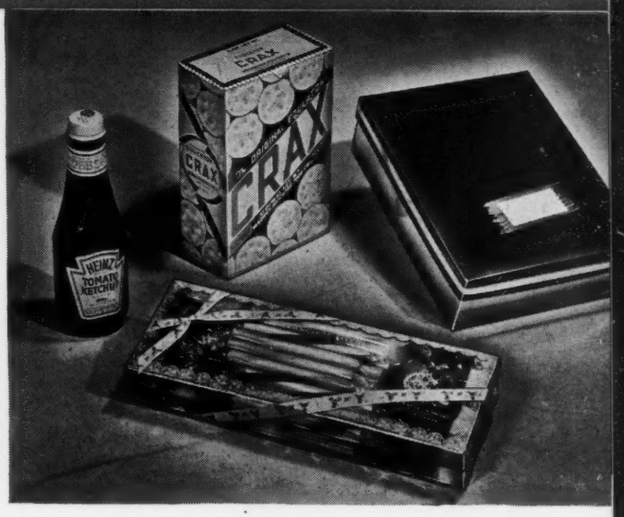
Score number 2 factor, Attention Value in the same manner. Does it figuratively "ring the bell" to gain consumer attention? If it is poor to mediocre, give it a score of two, two and a half, or three, keeping in mind that the Perfect Factor Value is six in this group. Regarding factor three, Color Harmony—Did you accept the colors your printer had on hand or did you consider the three color variables in relation to hue, purity and luminescence, and color contrasts?

Peter Paul's gum package is a good example of color harmony. The deep red contrasts well with the deep blue, making the white letters "whiter" in both cases.

Factor four, Typography, should be evaluated as to its readability and design in keeping with the product. Walking within six feet of a package, a consumer should be able to identify its trademark and contents readily. This means identification either by sight (a transparent package) or by reading during three slow steps, remembering that the shopper's eyes dart here and there and do not dwell on any one package until interest has been aroused.

The sixth factor, Shape and Proportion could also be considered as part of the *functional* group. Under the *appearance* group it should be judged from appearance only. The square milk container (Fig. 2) fits both classifications.

Continuing under the *appearance* group is a cellulose acetate container allowing almost 100% visibility, a perfect score of six in this case. Also illustrated in Fig. 2 is National Biscuits' familiar trademark on an end label showing excellent Group or Family Tie-In with other packages. A good example of Promotional Tie-



4—Key-opening can is "appropriate container" for meats. Foil envelope for dehydrated soup rates high as a "water-vaporproof" package. Cellulose acetate in continuous rolls is material of "fabricating adaptability" for toothbrush package. Heat-sealable films and labels for cakes score high on "adaptability to wrap and label."

5—"Sensory stimuli" are very important in sales appeal packaging, and the transparent acetate box for candy rates high in this respect. Eaton's stationery is an example of "quality appeal," while Heinz' ketchup personifies "prestige". Crax rates high for "appealing trade name"—short, catchy, descriptive, easy to display.

In is International Harvesters series of packages. Over 300,000 parts and pieces of equipment including trucks, tractors and farm machinery, bear the distinctive I-H symbol. Emphasis has been placed on the I-H tie-in in promotional advertising in 17 nationally circulated magazines and newspapers with a total circulation of 20 million copies. (This story was told in MODERN PACKAGING, Jan. 1946, p. 94.)

After each factor in this group (with the exception of those eliminated) has been scored, total the individual factor scores and mark the total off on the side of the chart adjoining the group with an "X."

Proceed in the same manner to the *consumer* factors group. Give each factor thoughtful consideration and score it against the Perfect Factor Value. For instance, is the package in the quantities the consumer requires Easy to Carry? A near perfect example (as illustrated) is the Coca Cola carry home package (Fig. 3). This was the answer to how to get soft drinks into the home. Another excellent example of consumer consideration relative to Easy to Empty or Use is the salt container with its easy pouring spout. Try and sell table salt without this feature!

The interest in Re-usable containers is fast becoming popular. One of these re-use materials is plastics, as shown in the molded polystyrene Easter egg (Fig. 3) holding a mixed assortment of chocolates. The package is too expensive to be used strictly as a container in relation to its contents, but its re-use value for knitting yarn, jewelry or other items makes it saleable.

Too often a housewife is attracted to a product but due to lack of information she hesitates to buy. The Informative Selling Message with the tradename and contents are clearly illustrated in Fig. 3 in Chase & Sanborn's coffee bag which gives the customer the information she desires, including the date of packaging.

If the information is of a too technical nature then tell her what the product will do. The lady of the house doesn't care if a paring knife is "high carbon steel" or "low carbon steel." She is more interested in and can be sold if she is told it is "stainless steel" or that "it peels paper-thin."

In evaluating packages don't overlook the importance of consumer factors. You may produce an excellent product but if it ruins the purchaser's manicure to get to it, sales are going to slide.

After totaling the consumer score and charting it on the consumer side, proceed to the *functional* group.

During the war years many products were packaged in any materials that were available. Today manufacturers are beginning to choose again, even though materials are still on allocation. In scoring number one, Appropriate Container, consider the balance of the *functional factors*. If none of these can be improved upon then you have the perfect Appropriate Container and score it according to the Perfect Factor Value. For instance, the tin can for meat products (Fig. 4) has the edge to date over other materials since it must be processed (cooked) after being filled and sealed, all on a high-speed mechanical basis.

The scoring of Factor Two, Moisture-Vapor (or Water-Vapor) Proof is based on the degree of water-vapor resistance of the material in relation to the keeping of the product. A dehydrated soup mix such as illustrated in Fig. 4 must have a low WVTR to keep the moisture out. The other factors following are scored in like manner up to No. 8. Fabricating Adaptability is based on the material in its simplest form, say in rolls or die cut sheets. By automatic means this is formed into a completely sealed package containing the products. The Pro-phy-lac-tic toothbrush, as illustrated, is one of the first products (*Continued on page 166*)

Simplified BOXES and TRAYS

. . . they're economical to manufacture and use

1

1—*No-Glu tray becomes package for dates, overwrapped with cellophane and heat-sealed. One feature of new construction is its rigidity.*

In line with the trend in certain specialized fields of consumer packaging toward folding boxes and trays that are equally adaptable to automatic handling and to hand packing operations are three new box and tray structures developed by Claude D. Painter, of San Francisco. Early acceptance of these designs, currently being introduced to the trade as the "No-Glu," the "Snap-Up" and the "Flip-End," seems to indicate that they will occupy an important position in filling today's needs for better boxes and trays, in the face of drastic shortages of boxboard as well as practically all types of mechanical box-making and packaging equipment.

All three basic designs (protected by patent applications) are manifestations of Painter's theory that the layout of the perfect box structure must be developed with all score and cut lines springing from a straight line and the angle of a square. All three are scored and die-cut from the blank stock in a single operation. All three embody such features as utmost economy in the consumption of boxboard and extreme simplicity, with most of the elements involved being 100% functional.

Most notable in respect to economy of boxboard is the Flip-End, which uses 100% of the stock and requires no stripping after die-cutting — a feature claimed to be unique among folding paper boxes. The No-Glu, while requiring some stripping, is said to use more than 95% of the blank. Glue is not required in setting up either of these box or tray structures. When the boxes are filled, there are no visible interlocking devices, such as staples or fish tails, and no visible scores.

The Snap-Up design forms a glued box. However, in common with the other two, it requires no staples.

Unusual rigidity, another inherent quality claimed for the Painter designs, is said to be achieved through combining the forces of two fundamental engineering principles—one structural, the other an application of the physical properties of the raw material.

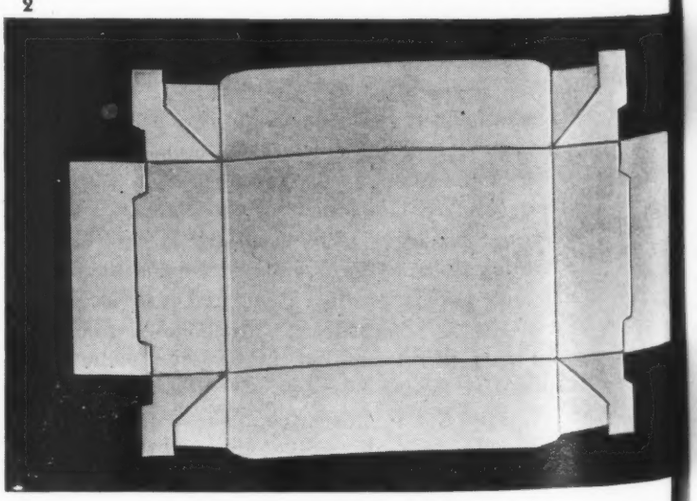
In reference to the former, reinforced interlocking end structures are so designed that cuts and score lines automatically break at the proper angles to permit the self-locking ends to form absolutely square with sides and bottom. By means of an ingenious fold, corners are securely locked or clamped between the inner and outer thickness of the end material in the application of an overlapping, interlocking principle.

The second point applies to the method of die-cutting the flat blanks from the sheet stock. This is done in such a manner that the natural grain of the raw material runs crosswise and sets up a tension against the side scores, throwing the sides upward and contributing considerable resiliency to the finished box or tray.

Designed for high speed production on present standard equipment—semi- or fully automatic—the No-Glue and Flip-End trays are delivered to the customer either as die-cut and scored flat blanks, ready for side folding, or as side-folded flats, ready for rapid manual set-up. It is reported that both trays feed rapidly

2—*Scored and die-cut blank of news-lined manila board that forms date tray, showing how 95% of blank is used.*

2



through conventional box-making equipment with the glue beads lifted from the gluer. The ends and side walls are turned at the base score lines and the side-folded flats are ready for packing and shipment.

One feature which distinguishes this entire group of box structures is their adaptability to rapid manual set-up, a significant point in view of the scores of products such as candies, confections, frozen foods and other commodities handled by small packers which lend themselves to hand-packing operations. So simple are the fundamental designs that any of the three boxes can be set up manually, it is said, at speeds approaching machine operation.

The first commercial application of the Painter trays to the packaging of dried fruit — a field in which they may be particularly useful — was made by the Albert Asher Co., of San Francisco, which recently adopted an open-top No-Glu tray (Fig. 1) as the container for their Tropic Brand California dates. According to Charles Yelverton, general manager of the Asher company, the new tray has made possible a saving on labor in their hand-packing and wrapping operation of approximately 400%.

Patent-coated, news-lined manila board is the material used for these date trays, the die-cut and scored waxed blanks being side-folded by the manufacturer before delivery to the user. The package is overwrapped with heat-sealing cellophane in a continuous hand operation by revolving or turning the filled tray in a sheet of the cellophane, lapping the ends across the bottom, then pushing the package against an iron for heat-sealing.

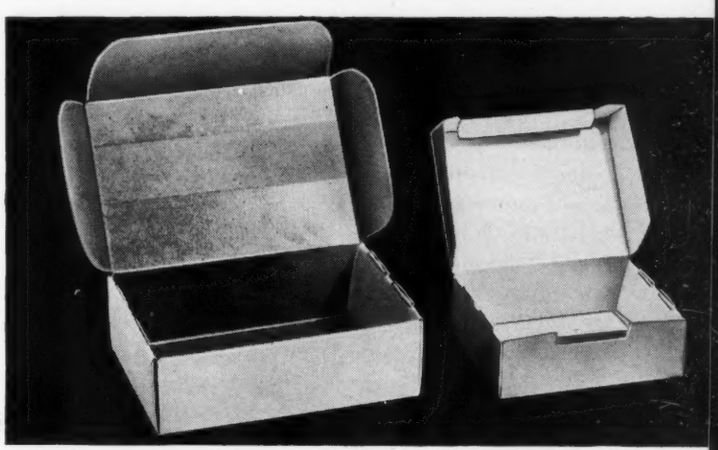
The No-Glu tray is formed (Fig. 3) in one operation merely by pushing the ends together and folding the overlapping end flaps over into the inside of the box. In addition to replacing a conventional glued box and glassine liner, the present package does away with a comparatively slow filling and wrapping operation involving manual set-up of the box, insertion of the liner, and sealing the ends after filling.

3—*Tray, received flat with sides folded in, is manually set up in a split second. Bottom carries brand name.*

3

6

6—*Same No-Glu principle forms effective counter-sale carton for Desert Sun dried fruit, using minimum of board.*

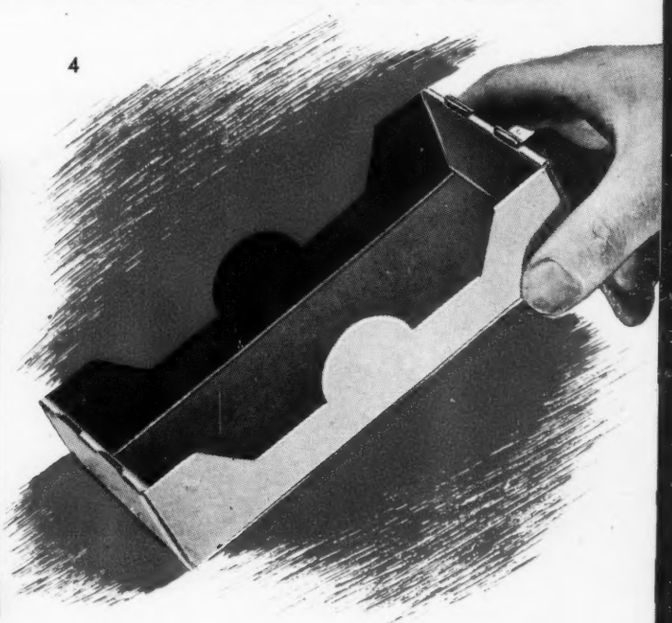


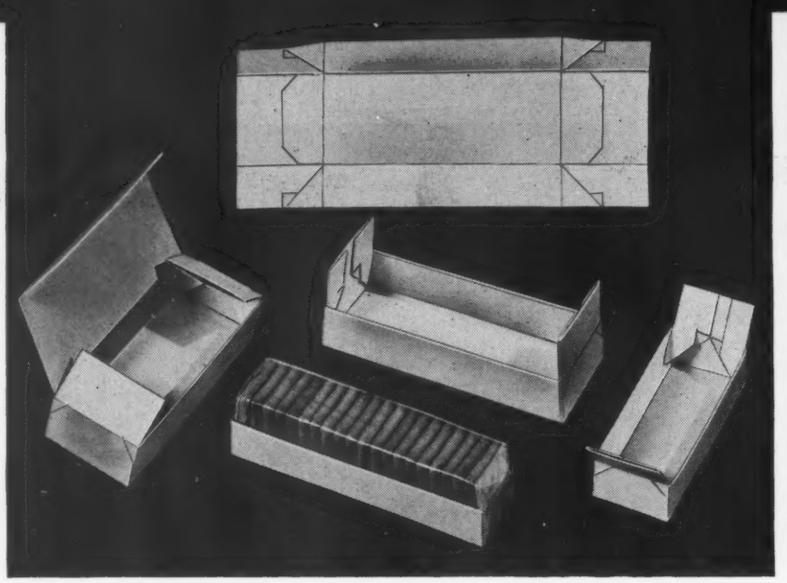
5

5—*No Glu design in closed box for frozen foods, etc.*

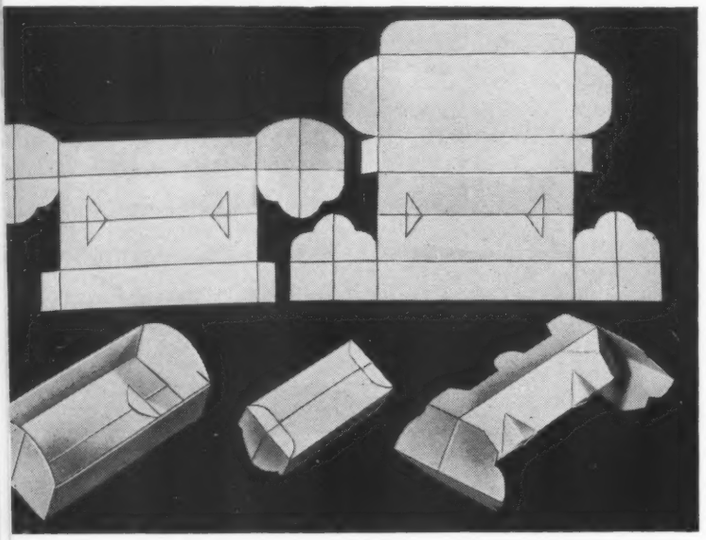
4—*Variation of No-Glu tray for maximum visibility has cut-out sides. Inside is wax-coated for moist products.*

4

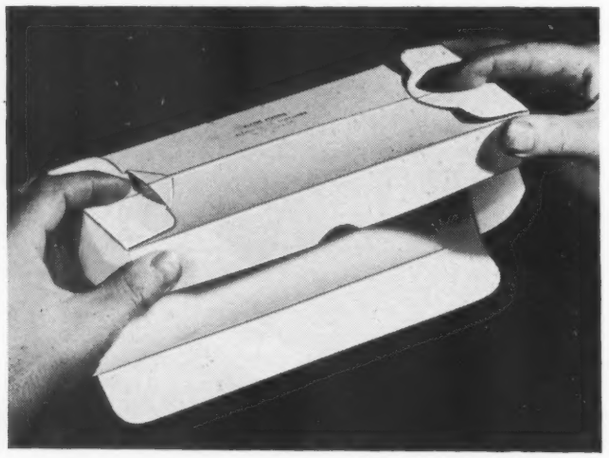




7—*Flip-end design forms boxes or trays using 100% of the blank, as shown. It makes a tuck-in lidded box or tray.* **8**—*Shows how Flip-end tray is setup. Has cut-out sides and curved end uprights.*



9—*Snap-Up design requires gluing of tabs during manufacture but is shipped folded flat and instantly set up. It provides ventilation through slots in the bottom.*



10—*Showing technique of assembling the Snap-Up box. Ends are simply brought around and snapped into slots in the bottom of the box. The sides are continuous.*

The same basic box, but with a hinged, flapped lid provided in the one-piece blank, makes a rigid closed carton (Fig. 5) which will be used for frozen foods. In one design, the lid flaps go inside the box; in another case they fold in such a manner as to make a snug, locking closure around the outside.

Of fundamental importance to the packers is the exceptional rigidity demonstrated by the closed carton, which is claimed to allow it to feed through the automatic wrapping machines at greatly increased speeds. This is attributed to the ability of double walls and interlocking features of the end structures to withstand the excessive stresses usually imposed on box ends when machine wrapped. Other advantages are that the die-cut and scored blanks can be water-waxed by means of the so-called ice-bath method at high production speeds, and that all of the new designs are adaptable to a wide variety of boxboards — a useful feature in view of current scarcities.

With the No-Glu frozen food carton, the complete blank is die-cut, scored and wax-coated in the same manner as a tray. Reaching the packers flat folded, the cartons are set up and filled by hand, then machine wrapped.

Due to the dearth of the better grades of board, such as sulphite, a manila-lined chip, patent coated on the outside, has been tentatively selected as the material which will best cut, score and break without distortion and at the same time best meet the requirements posed by the freezing process and the packaged products. Those cartons used for berries and fruits with high water content will be lined with moistureproof, heat-sealing celllophane bags. The inventor claims, however, that a wax-coated No-Glue box will actually hold water for a considerable time, a feature which, when combined with better grades of board, may render these boxes adaptable to any frozen food commodity, including fish and berries, without the use of a liner.

In most cases the cartons will be printed in two colors. A clear panel will be left for the variety of the product, which will be spot (*Continued on page 166*)

Frozen pack for serums . . . in air cargo

Fast shipment of life-saving drugs and serums is one of the most essential uses of air cargo. Many of these products are perishable and must be held at proper temperatures during shipment to maintain potency.

Lederle laboratories, Pearl River, N. Y., one of the largest volume shippers in this field, has developed an efficient packaging technique for air shipment of perishable serums which assures protection for four days.

The Lederle serum shipping unit is an adaptation of principles used for previous refrigerator containers and involves the use of a square pint can filled two-thirds full of water, frozen in a subzero chilling room at the laboratory. Cans are filled two-thirds full and screw cap is used to prevent bursting.

After freezing, the can containing the natural ice is placed in an insulated, moisture-resistant, laminated bag (Jiffy) combined of kraft, asphalt and macerated paper. Space around can is then filled with dry ice.

The bag unit containing the can of natural ice and packing of dry ice is sealed and placed in the center of a standard corrugated shipping carton to form a core around which the vials of vaccine are packed. Several sizes of shipping containers are used, depending upon the quantity of the shipment. Sometimes in larger shipping containers more than one of the can-in-bag units are used for maintaining proper temperature throughout the container. Cellulose wadding is used for interior packing when it is necessary to keep the individual serum package units from shifting around in the shipping container. The corrugated container is sealed overall with kraft paper tape so that there are no openings, making the container comparatively air-tight.

Test shipments over a period of years have indicated that the dry ice lasts about 24 hours and also brings the contents of the container to a satisfactory low temperature so that the natural ice is intact. After the dry ice has disappeared the natural ice takes over and gives protection for about three days.

Most planes carry no refrigeration. Usually the difficulty is to keep cargo from freezing during flight. However, in the protection of serums, it is necessary to offer constant protection to prevent any drastic temperature changes which might occur when the planes are on the ground or protection of the shipments to and from airports.

Lederle has found this packing technique to be satisfactory under all such conditions.

A total of 300,000 smallpox vaccination units, weighing 3,000 lbs. packaged in this manner, were recently rushed to the Pacific Northwest to check an outbreak of smallpox in the Puget Sound area. Several weeks ago, 5,000 lbs. of diphtheria antitoxin, vaccines, penicillin and other drugs were shipped to Cuba from Philadelphia by Pan American Airways in one of the first sky trains used for civilian air cargo, consisting of a transport and three gliders and carrying a total of 10,000 lbs. of cargo. This flight was experimental to show that one such sky train could carry half again as much cargo in one flight as four transports.

1—Lederle refrigerated units assure protection for four days. **2**—*Core of unit is can of natural ice placed in bag with dry ice. Drug packages are packed in shipping container around core.*

1 PHOTO, UNITED AIR LINES

2

PHOTO, COURTESY NATIONAL SKYWAY FREIGHT CORP.

1—*At LaGuardia Field, bag machine is transferred from truck to Flying Tiger cargo plane for delivery to Kansas City. Machine is simply lashed in place; no crating is necessary. Engineer (white coat) goes along to supervise installation of machine.*

Flying machines

. . . an enterprising manufacturer of bag-making equipment proves that in this air age the delivery bottlenecks CAN be broken

Meeting the need for packaging supplies in these unusual times requires unusual methods. With forthright action, it is often possible to break the bottlenecks and overcome the nagging delays which would otherwise hamstring production programs.

This is the story of a Long Island bag maker who, needing additional equipment for the production of transparent bags, flew to California to get a machine, ended up by buying out the machinery maker and flying his whole plant back to Long Island, and soon found himself in the machinery business. The same air transportation that made this possible is now delivering cellophane-bag machines to other users far across the country within 24 hours after they leave the production line.

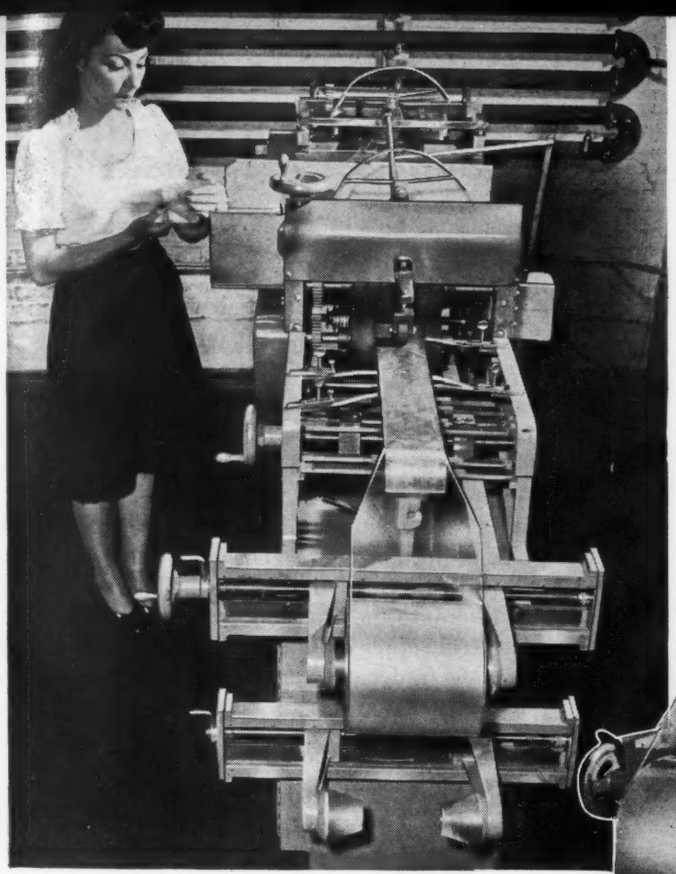
The man with the idea was Harry W. Konopny, who until four months ago had no interest beyond turning out as many bags as possible for the customers of his Kono Transparent Container Co., in Flushing, L. I. Expansion required equipment, and most equipment makers couldn't even guess at a delivery date closer than 18 to 24 months.

With his situation rapidly becoming critical, Mr. Konopny learned of a bag-making machine produced by the Allen-Mead Co., a small Los Angeles firm, which seemed to fit his needs exactly. Within 24 hours he was in Los Angeles to see the machine demonstrated. It exceeded his fondest hopes. But here, as elsewhere, the manufacturer could make no promises of immediate delivery of the machines he wanted. The patents, however, could be purchased.

Within a few days the deal was concluded, and Mr. Konopny was the owner of two plants—about 3,000 miles apart. To bring them together quickly, he conceived the idea of flying the West Coast plant to New York. All the essential dies, tools and machinery necessary to make the machines comprised a load of about 15 tons. The National Skyway Freight Corp.—the "Flying Tiger" line—took on the job. Within a matter of hours after the takeoff from Los Angeles, the load was set down on LaGuardia Field, from whence it was trucked to the Kono plant nearby.

Less than five weeks after this unprecedented transcontinental transfer, the first completed bag-making machines were coming off the Flushing plant's assembly line. The Kono company's own needs for machines were soon taken care of, and Mr. Konopny let it be known, in a quiet way, that he was in a position to sell machines to other users.

The response was immediate and pressing. Other



2

2—Twenty-four hours after leaving New York, machine is in operation in Kansas City biscuit plant. Head-on view from intake end shows cellophane running from roll around forming plate, width of which determines width of bag. Plates are interchangeable. Beneath roller in center of forming plate at back is vertical heat-sealing unit which forms continuous seal the length of the cellophane.

companies were in just as big a hurry as he was. If he could move a whole plant by plane, why couldn't he deliver machines to buyers in the same way?

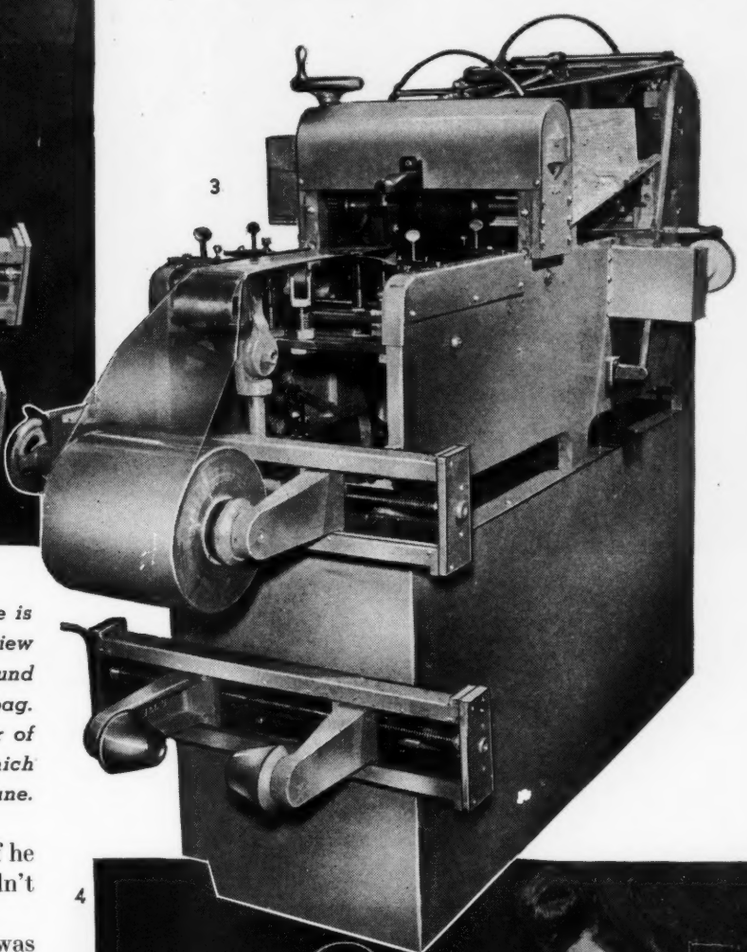
The first machine produced for outside delivery was delivered to LaGuardia Field at 7 P. M. one Thursday. By Friday afternoon it had been installed in a biscuit company plant in Kansas City and was turning out cellophane bags for cookies at 10,000 an hour.

Subsequently, three more machines were built for the same Kansas City biscuit plant, and all were delivered in the same way. The Kono-Mead Equipment Co., set up as the machine manufacturer, is currently producing about seven machines a week, and all except those for local delivery are being air-delivered by National Skyway Freight. The company states that, once an order is filled, the machine can be in operation within 24 hours in any factory in the United States reasonably near airport facilities.

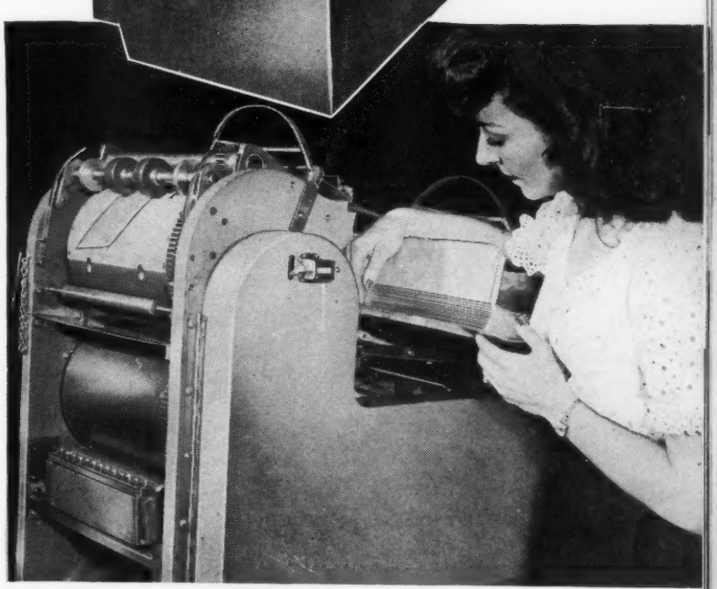
By fall, it is estimated, sufficient of the new machines will be in operation to have increased the over-all supply of transparent bags by 10,000,000 a day. The bags are suitable for many types of foods—cookies and cakes, potato chips, popcorn, cocoanut, peanuts, candy, meats—frozen and dehydrated foods, drugs and cosmetics, and textiles such as hosiery and men's shirts.

The machine is compact (*Continued on page 170*)

3—View shows folding rollers beneath former. Gear mechanism at back attaches to draw rollers, which draw cellophane through mechanism. Center heat wheel automatically drops away when motor stops, preventing over-heating. Provision is made for second roll of cellophane when double bag is desired.

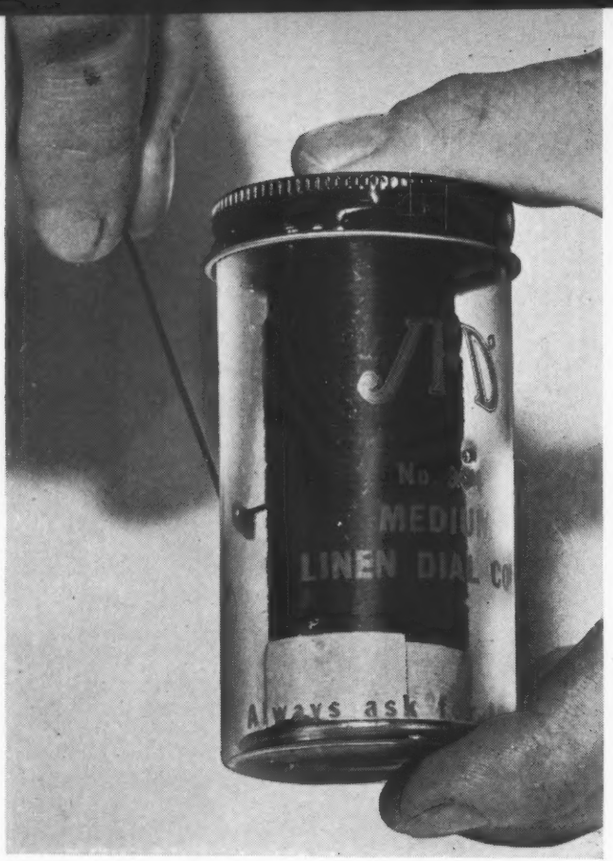


3



4

4—Rear view. At top are arches of automatic rake which brings completed bags together in counted piles of 25. Note automatic counter near operator's right hand. Top cylinder heat seals bags horizontally, after glue-sealing by glue blade on cylinder below. Bag length is determined by size of gears inside gear-case in foreground.



Transparent dispenser

A dispensing container for radio dial cord which affords transparency as well as protection is the latest packaging development introduced by the JFD Manufacturing Co., of Brooklyn.

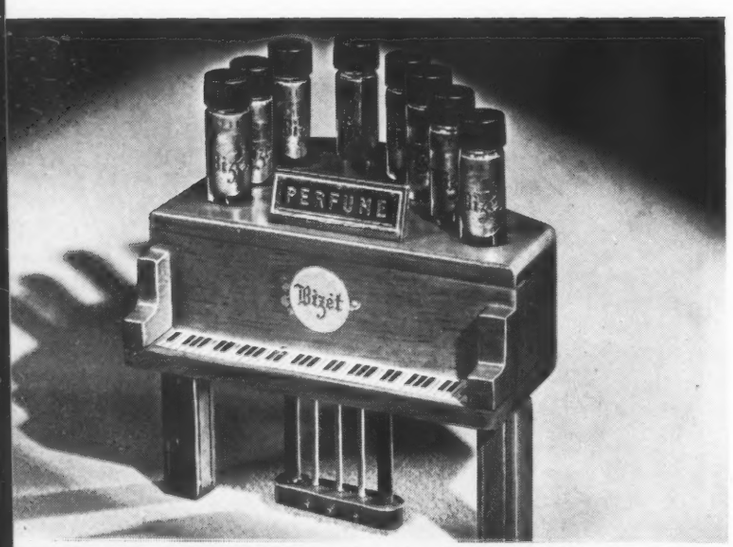
The molded acetate container, topped with a metal screw cap, holds a metal spool of the cord. In the wall of the acetate is a metal eye through which the wire is threaded for dispensing. Therefore the spool can be kept from unwinding because it need never be removed from the jar.

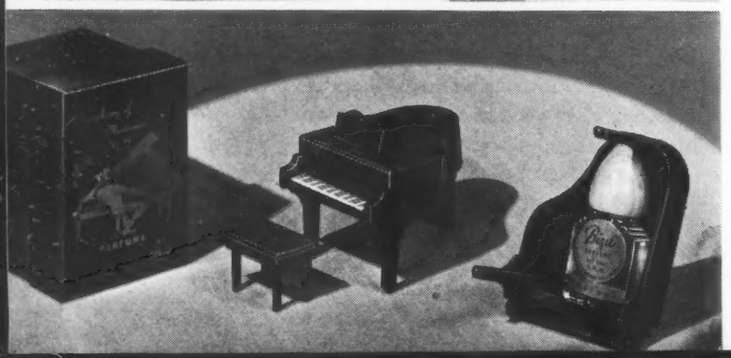
Another convenient feature of the package is a small hook-like projection on the bottom of the metal eye around which the wire may be wound to keep it from slipping back into the container when not in use.

Red lettering applied directly to the acetate is used to reproduce the tradename and other information such as the number, size and type of cord. Along the side is printed a three-inch rule against which the wire may be measured while dispensing.

Twelve of these containers are packaged in a paperboard shipping container which opens into a handy display unit for counter or window use.

DESIGN





Pianos of perfume

Bizet Parfumers of Los Angeles, a company which has taken its name from the famous French composer, follows through with its policy to style perfume packages to resemble musical instruments (see MODERN PACKAGING, September 1945, p. 113) with its latest creations, perfume in pianos.

The small wooden piano, which sells in the higher price line, holds eight vials of scent—all the odors put out by Bizet. Indentations in the lid hold the bottles erect and the unit comes complete with a small wooden bench to make an attractive dressing-table ornament with re-use value as toy.

The smaller piano is cellulose acetate in a mahogany mix. A 1/4-oz. bottle of perfume is secreted in the innards of the instrument. The entire unit is outerpacked in a set-up box in a choice of either maroon or pale rose.

CREDITS: *Wooden Piano, Helsyl Piano Co., Philadelphia, Pa. Plastic piano, New York Merchandise Co., New York. Boxes. Stylepak Box Corp., Los Angeles, Calif.*

(*Page 118*)

Midget bug bombs

The Army's famous insecticide bomb is now being made for civilian use in a handy miniature one-time-use size by Matco Products, Inc., Burlington, Vt.

The construction of the bomb is similar to the large size with the exception of the dispensing feature. Since this is a one-time bomb to be discarded after use, an elongated stem is provided which is simply snapped off and the container held aloft until the insecticide is ejected. Each bomb is said to treat a room up to 5,000 sq. ft. in area with a 5% DDT plus 1% Pyrethrum solution.

Matco packages the bombs in sets of three in small green folding cartons printed in a darker green and red. Twelve of these small containers are shipped to the retailer in a folding carton which opens into a counter display.

Because the public is not yet thoroughly familiar with this new type of insecticide dispenser special emphasis has been placed on the correct method of use, both on the small container the display carton.

CREDIT: *Cartons, Associated Folding Box Co., Boston, Mass.*

HISTORIES

Diaper news

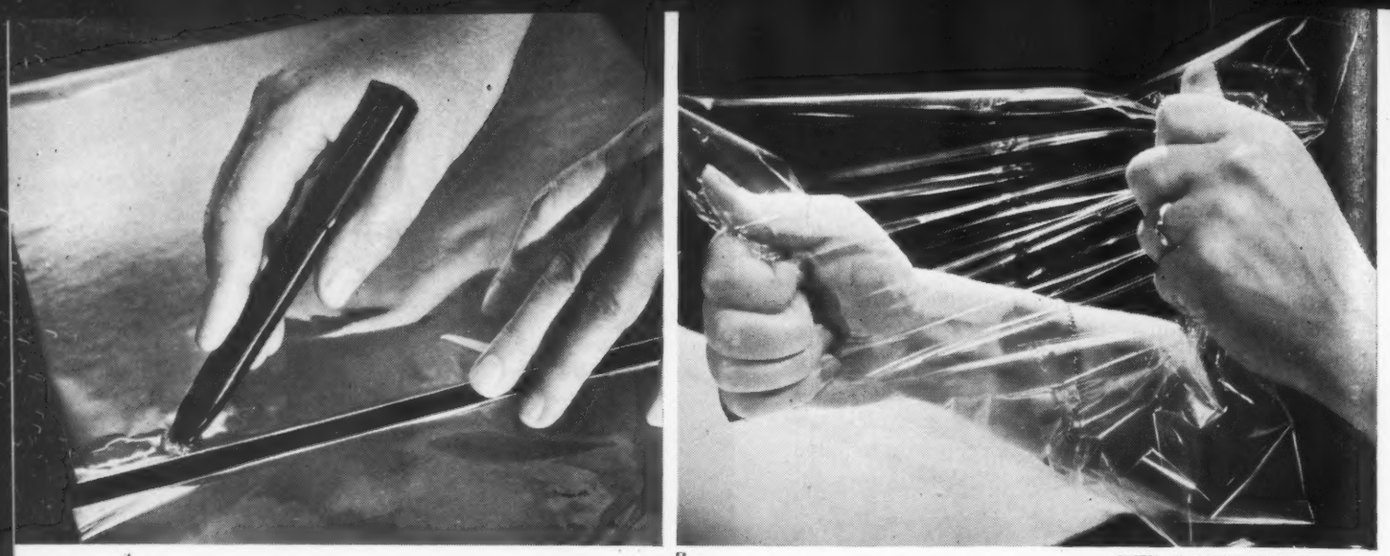
Chix Down-Weve gauze diapers are the first of the Chicopee Sales Corp. products to be packaged in a newly designed container. The company plans adapting the design to other infant products in its line.

Candy-stripe pattern distinguishes the new folding carton since it is often the theme in many infant departments and is popular for such things as toys, upholstery for cribs and baby furniture.

The simplified design of the new folding box provides easy identity of the product. A single color—blue on white—replaces the elaborate and outmoded three-color design of the old carton. The Chix name stands out boldly in large blue letters in a white block centered on the face of the box. In a small square to the left is the newly designed trademark for Chicopee products. The candy stripe appears to the left and is carried around to the end panel on that side. This panel identifies the product when stacked on shelves. Other side panels carry only a single line of sell copy at the bottom.

CREDITS: *Design, Koodin-Lapow Associates, New York City.*

(*Page 119*)



1 2 PHOTOS, COURTESY CELANESE PLASTIC CORP.

1—In hand operations, a solvent adhesive is usually applied to the cellulose acetate film with a pen-type applicator which has a wick-like tip to assure an even flow. 2—Two surfaces of the acetate film are welded together instantly by the solvent action. The resulting joint is as strong as the sheet itself.

Acetate adhesion . . . *welding with solvents*

Transparent cellulose acetate films—the very light gauges from 0.00088 to 0.005 in.—are coming back into the packaging picture following the war-time blackout when they were almost exclusively devoted to military uses. As rapidly as production facilities permit, the films are being converted to bags, wrappers and window packages, particularly in the rapidly growing field of prepackaged produce.

Acetate film has many properties which recommend it for the latter purpose. It also has special requirements in handling, especially in the choice and application of adhesives, since it is not a heat-sealing film. Since acetate film was last in general packaging use, many advances in the solvent adhesive technique have been made. It is the purpose of this article to bring the record up to date, both for former users of acetate film and for new users who may not be familiar with its adhesive requirements.

Cellulose acetate film is made by casting a basic cellulosic ester which is water-insensitive and can be put in solution only by certain solvents. In these respects it differs radically from regenerated cellulose film, with which it is most frequently compared. Its base material is usually cotton linters rather than wood pulp. Acetate film is unusually brilliant and clear, and is permeable to water vapor. When in a moist condition it also permits the slow passage of certain gasses, including CO_2. It has exceptionally good dimensional stability under varying atmospheric conditions.

It is these properties which account for the current interest in the use of acetate film for prepackaging fruits and vegetables. It is claimed for acetate that it it not prone to wrinkle or to cloud up due to excessive condensation of moisture on the inside of the wrap, and that it permits a beneficial venting of the CO_2 given off by the produce.

The application of a heat-sealable lacquer coating to acetate film—although it provides excellent water-vaporproofness—is difficult, due to poor adhesion to the base film; since it would destroy or impair most of the special properties it is not usually attempted.

Acetate film is therefore generally classed as a non-heat-sealable material. The very strong, "welded" seams which characterize its formation into bags and wraps are obtained with various types of solvent adhesives, to which the film is unusually responsive. Some of the newer types of applicable solvent adhesives and methods of applying them will be described below.

Solvent adhesives

Cellulose acetate is quite reactive and soluble in solvents like acetone or its derivatives, some of the ester solvents and others. For ordinary hand-wrapping operations, the light-weight film may be sealed with a blend of solvent mixtures. There are numerous formulas for solvent adhesives which will do a quick and effective sealing job, but the requirements of the particular packaging application must be kept in mind. For a bag which will contain moist produce, for instance, care must be taken to use an adhesive which when set up is not water-soluble.

The films used for flexible wrapping are highly plasticized, for low temperature and good flexibility, and hence highly susceptible to solvent action or, as the adhesive manufacturers term it, penetration. In this case it is necessary to temper the solvent adhesive blend with non-solvent materials—those which are to some extent compatible with the acetate itself—in order to

avoid a warped and unattractive glue line which would result from excessive solvent action. Minimum action and minimum warp is the best rule to follow. Incompatible solvents of the non-reactive character will cause a white, filmy blush after they dry, and produce a glue line that is quite warped and unattractive.

When acetate film is used on automatic or semi-automatic wrapping or bag-making machinery, it is generally advisable to select an adhesive having some body. Here the adhesive manufacturer must compound his formula with bodying agents and with solvents which will be reasonably fast in evaporation and solvent action yet not too fast, because during stops on the machine the adhesive must remain on the surface and not dissolve completely into the film or there will be some loss of material when the machine is started up again.

For good machine operation, the adhesive formula must be of the correct viscosity for both side seam and bottom seam application at high speed. At the same time, the solvent action must not penetrate the material completely. With the lightweight, highly plasticized flexible films it is very difficult to prevent passage of the solvents from the glue seam through the film to the face of the bag or wrap, which causes an unsightly appearance, particularly on reverse-printed bags or envelopes. Nevertheless, adhesives have been and are being developed which will give protection against this difficulty.

One of the recent developments has been the emulsion type of adhesive, which contains only a small amount of solvents, just sufficient to blend the acetate film with the ingredients of the emulsified adhesive. The first emulsion formulas along this line showed poor permanence of adhesion, but this has now been overcome by adjustments giving a slightly stronger action to the solvent content. A peculiarity of this emulsion type of adhesive is that it is creamy in appearance when applied, but when dry becomes as transparent as the film.

From the standpoint of guarding against over-penetration, adhesive makers believe the emulsion type is an improvement over the commoner solvent ester adhesives. It is also said to have advantages in trouble-free machine operation.

Where a positive, waterproof seal is the primary requisite, however, as in the packaging of produce, the straight solvent blend adhesives and certain solvent lacquer adhesives are still most widely used. The solvent action blends the film right in the adhesive, giving a "weld" of one solid thickness of material which will not give way under any conditions short of destroying the material itself. The action of such adhesives is practically instantaneous.

Some of the new resin emulsion adhesives, however, are water-insoluble after setting up. They are odorless, tasteless and non-toxic and generally excellent for automatic wrapping and bag-making purposes. At least one manufacturer is now recommending their use.

In making acetate bags for prepackaged produce, it is necessary that the seam, both side and bottom, be waterproof and secure under the high moisture content of the produce. At present the solvent weld type of joint is most widely used by manufacturers of this type of bag. Emulsions have been tried for this work, but they tended to soften up under extreme humidity and water conditions. However, this is said to have been overcome experimentally in adhesives laboratories, and it may be that emulsion adhesives containing some solvents will be the ultimate best answer.

A simple applicator resembling a fountain pen, having a reservoir and felt wick, is almost universally used for hand application of solvent adhesives to acetate film in hand-wrapping operations. Brushing the applicator quickly along one of the surfaces to be sealed and then applying the second surface of film provides an instantaneous weld of great strength.

Some of the machines which overwrap packages automatically use felt wicks supplied with solvents from a fountain. Other types of machines use narrow metal wheels to transfer bodied adhesives from wells.

Hand-wrapping applications also employ stencils, either jig-operated or hand-operated, to transfer solvent adhesives from felt pads to the wrapping sheet. The pad operates as a reservoir to remoisten the stencil after each impression. Acetate windows for boxes and bags are usually applied in this manner, using developed adhesives which have instantaneous tack.

Laminating cellulose acetate film to boxboard, paper, aluminum foil or other material is accomplished with lacquer or resin emulsions or thermoplastic compositions, depending upon the fabricator's equipment and combination of materials. Microcrystalline wax also is used to effect adhesion (*Continued on page 176*)

3—*In machine operations, any roll-type glue pot like this one will handle adhesive suitable for acetate film. Rollers transfer a line of adhesive to the film as it passes through bag-making or wrapping machine. Solvent adhesives, however, are usually fed through a bottle.*

3

1—Pigtails on the gift boxes of the Margaret O'Brien line are real braids of woolen yarn. Included with each set will be a story picture book on good grooming telling about plain Jane's visit to Margaret's home.

Hitched to a Starlet

. . . a new cosmetic line for little girls

Margaret O'Brien, juvenile screen star, is featured on a whole line of toiletries packages for little girls to exercise her talents by proxy in winning the "aw-I-don't-want-to" pig tailers to an eager career of bathing, washing and scrubbing.

The Margaret O'Brien line was introduced to the trade in June by the Ali Baba Corp., which ventured successfully into the young cosmetic field about a year ago with its Debuette line.

The new line, according to the company, is designed to make a mark in the now well-established junior cosmetic field which has gained acceptance in nearly every department store throughout the country and in a market estimated at 9,000,000 children between the ages of 4 to 12 (MODERN PACKAGING, December 1945, p. 87).

The merchandising program and what constitutes also "a real public service," says the company, is based on the idea that package frills of this type will help as nothing else to "bend the twig in the direction of cleanliness, neatness and good health habits." They also state their aims in a quote from the former article in MODERN PACKAGING: "If you can train a child during the early years when habits are formed, those habits will be deep grooved for life."

What better method, originators of the new line say, of gaining prestige for a young idea than identifying it with a name that has become a popular symbol of attractive childhood to the American public? They point out that Margaret's pulling power is supreme and that the young starlet receives more fan mail than Van Johnson or Greer Garson—including letters from grown-ups as well as children.

The manufacturers are playing heavily on the "I-love-to-do-it" theme with dozens of verses scattered throughout the labels and reading matter such as "I love to bathe, I love to scrub, I love the bubbles in my tub."

The line includes shampoo, bubble bath, toilet water, hand and body lotion, powder mitt, soap, sachet, lip pomade (looks like Mom's, but is colorless), toothpaste and manicure items—everything that aids in good grooming, sold separately or in various combinations put up in 17 different gift sets.

The first striking package feature is the three-dimensional "pigtail" box. Covers on the larger gift sets carry a reproduction of a black-and-white photograph of Margaret O'Brien on which are mounted real raven-black woolen braids simulating Margaret's pigtails.

Background color is pink with polka dots—selected after a balloting including the staffs of several magazines catering to parents or child activities.

Next came the bottles. They're called "moving picture" bottles. The effect is achieved by application of the labels which are printed on both sides. On the side of the labels pasted to the bottles are photographic reproductions of Margaret shown in different poses—dabbing a bit of toilet water on her hanky, scrubbing in a bubble bath or lathering her dark tresses with shampoo. You see these pictures through the bottles and the pastel-colored liquids they contain. A dainty silk-screened floral design runs along the borders of the bottle in front of the picture emphasizing more definitely the third-dimensional space as you look through the bottles at the pictures. The jingles liven up the copy and informative data on the reverse sides of the labels which become the back panels of the bottles. The bottles themselves are stock molds with pink urea caps, but the unusual handling gives individuality.

The same photographic treatment of Margaret in pigtails with the pink background is used for all the packages in the line, including cartons for tooth brushes, toothpaste and lip pomade. The same design is also being reproduced on the collapsible tubes for the toothpaste. However, the real pigtails of braided black wool are used only on the large set-up boxes for the gift sets.

Another unusual idea is the method of die-cutting the flaps of the toothpaste and lip pomade cartons so that the head of Margaret stands up above the carton in die-cut relief when the flap is closed.

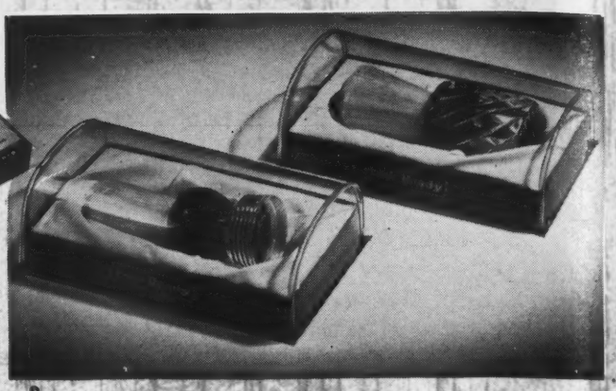
The final touch is a series of four story picture books of about 32 pages each which are to accompany the different sets on the subject of "beautiful hands," "beautiful hair," "beautiful skin" and "beautiful smile." These are treated in fictional style about plain Jane who pays a month's visit to Margaret's home. An autographed edition of the four books combined in one will be used as a premium idea.

CREDITS: *Designs, E. Leonard Koppel, New York. Boxes, Livingston & Co., New York. Box wraps printed by Pocassel Press, New York. Labels, Expert Printing Co., New York. Collapsible tubes, Niemand Bros., Long Island City, N. Y. Folding cartons, Modern Folding Carton Co., Brooklyn; Printing on bottles and lipsticks, Anigraphic Process, Inc., New York.*

2—*Photographic treatment of Margaret in pigtails with pink background will be used on all packages in the line. Unusual feature is die-cutting of pomade cartons so that head of Margaret stands up above carton in relief when carton flap is folded shut.*

3—*Bottles are called "moving picture" bottles. Illustrations of Margaret printed on backs of labels may be seen through glass and contents. Floral border enhances third-dimensional effect. Informative data and jingles appear on back of label as shown right.*

1



2

PACKAGING

3

4

5

1 A gayly planned folding carton gives counter appeal and sells a trade name for a new plastic fly swatter appropriately called "Odor-Swat," because it deodorizes while you swat. The swatter made of B. F. Goodrich Chemical Co.'s "Geon" resin also has a 3-way bottle opener in the end. Trade name dominates the design, while a cartoon illustration of "The King of Swat" catches the eye. Carton, Lindley Paper & Box Co., Marion, Ind.

2 The new Ever-Ready nylon shaving brush produced by American Safety Razor Corp., Brooklyn, N. Y., uses a curved transparent acetate cover to reveal the beauty of the brush and, at the same time, protect it from dust and dirt and excessive handling. The base of the container is black lacquered paperboard lined with satin to make an effective background for the brush. Box, Imperial Paper Box Corp., Brooklyn, N. Y.

3 Canadian rabbits, dressed, frozen and ready to cook, are packaged by the Societé Cooperative des Cuniculteurs du Quebec in a carboard boat overwrapped with cellophane and sealed underneath with gummed stickers. Since the adoption of this package the demand for the product far exceeds supply, it is reported by company officials, in spite of a recent 4-cent per pound increase. Cellophane, Canadian Industries Ltd., Montreal, Canada. Trays, Youville Printing, Montreal, Canada.

4 Fountain pens are high on gift lists and therefore demand glamour packaging. S. Buchsbaum & Co., has adopted a package for its Style King Magic Flow Pen that had visibility appeal. The pen may be displayed on the counter in its inner container with transparent acetate cover. An outer set-up box carrying both the trade mark and pen name completes the package. Containers, W. C. Ritchie & Co., Chicago.

5 The new label for Pinafore brand boned chicken packed by the Chicago Western Corp. shows a decidedly more modern treatment than the old. The lettering of brand name has been made larger and set in a straight line for easier reading. The design has been cleaned up and the pinafore is now

(*Page 124*)

6

7

PAGEANT

but a faint tracing in reverse white against the buff and maroon of the label. Label, R. J. Kittredge & Co., Chicago.

6 The jar for Plexo baby cream, a new product marketed by Plexo Preparations, has all label information and design applied directly to the jar by offset printing. In pink and blue on white, the package is one mothers should welcome because it does not smudge or soil. Animal figures give it nursery appeal. Printing, Anigraphic Process, Inc., New York. Jars, Hazel-Atlas Glass Co., Wheeling, W. Va.

7 Five miniature bottles in a dubonnet and brown sliding carton is being offered by the Sanford Ink Co., and called Penit Miniatures. The bevelled square bottles with metal screw caps contain five colors of ink to harmonize with personal correspondence. Caps, The National Seal Corp., Brooklyn, N. Y. Bottles, Owens-Illinois Glass Co., Toledo, Ohio, and Hazel-Atlas Glass Co., Wheeling, W. Va. Carton Craftsmen, Inc., Chicago, Ill.

8

8 All of the Marday and Marjane Vinylite appliance and bowl covers are now packaged in new transparent cellophane envelopes, according to Bland Charnas Co., fabricators. A red and white check forms a decorative border at the top and bottom and copy appears in red and blue. Each envelope carries an illustration of the appliance, bowl or bottle for which the cover is intended. Envelope, Milprint, Inc., Milwaukee, Wis.

9

9 The Northam Warren Corp. adds Odo-Ro-No Cologne deodorant to its line in a plastic-capped bottle. The product, to be used as a cologne all over the body, carries a simple label in red and white with the word cologne in blue. Both the outer carton and the label carry a heavy red arrow which points out the word deodorant—the unusual feature of the product.

10 Dermetics introduces a sachet, or as they call it, powdered perfume. The flesh-pink tone of the powder is visible through the glass jar with glass stopper. Applied lettering of trademark and product name is applied to the jar

(*Page 125*)

PACKAGING

10

in burgundy. Carton is smartly striped in gold, burgundy and white. Design, Chas. H. Burger, New York. Boxes, J. Makowsky Corp., New York. Caps and jars, T. C. Wheaton Co., Millville, N. J.

11

11 A lamination of aluminum foil and base paper is used by A. D. Atterbury Co. for quick-frozen broccoli. Printed in white, black, silver and two shades of green, the foil makes an effective, eye-appealing package. The lamination provides water-vaporproofness and since the material is heat-sealable, it prevents leakage. Foil lamination (Reyseal) Reynolds Metals Co., Richmond, Va.

12 Gerilac is a new ethical product to supply a dietary need for the aging put out by the Borden Co. Problem was to give the package an appearance of a food rather than a drug item. Solution was the use of clean colors and simple design treatment. Design, Frank Gianninoto and Associates, New York.

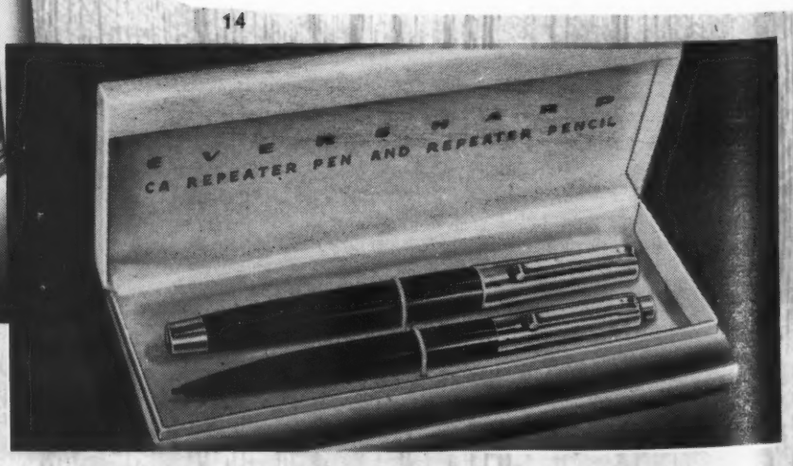
12

13 Scott's Potato Chips uses a paper-mounted aluminum foil with an application of heat-sealing wax on the back to package and protect these chips. Potato Products Corp., Chicago, adds eye-appeal to the package by roto printing copy and illustrations in brilliant blue and red against the brightness and sparkle of the foil. When sealed the material makes a moistureproof package. Package, Milprint, Inc., Milwaukee, Wis.

13

14 Eversharp uses gold and white to set off its newly introduced CA pen and pencil set. A white paper covers the lid and gold foil is used for the base. The white is repeated in the satin pad on which the set rests. Lettering inside the lid is gold. The box is part machine and part hand made and a cardboard sheath protects it from dust and dirt until sold to the customer. Box, W. C. Ritchie & Co., Chicago, Ill.

15 Chinese red and black are the appropriate colors selected by John H. Wilkins Co., for their new family of tea bag cartons, 16's, 48's and 100's as well as for their cor-



14

rugated shipping containers. Legibility and bold color for strong identity and family resemblance were among chief considerations. Cartons and shipping containers, Robert Gair Co., Inc., New York.

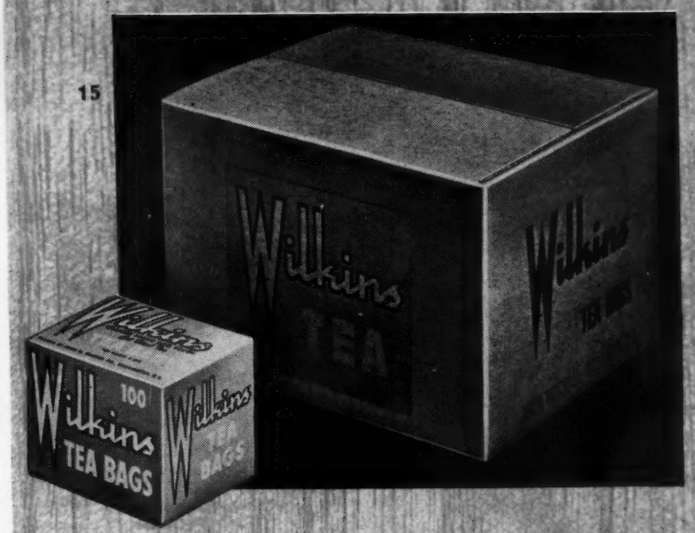
16 The three-fold purpose of the redesigned William Penn package is to emphasize the long-established name, to give added prominence to the name "William Penn," and to give the label an early American appearance associated with a famous early American character. Merchandising advantages of the redesigned label were determined by extensive testing in retail outlets. Labels, Fleming Potter, Inc., Peoria, Ill.

17 Old and new packages of Gulden's Mustard show how a famous old label has been given new visibility for shelves, counters and aisle displays of modern food stores. Bolder effect is achieved skillfully in practically the same space by eliminating the wide border treatment and rearranging contents data. It is felt that the new design will "speak" for itself when placed beside competitors in the self-service market.

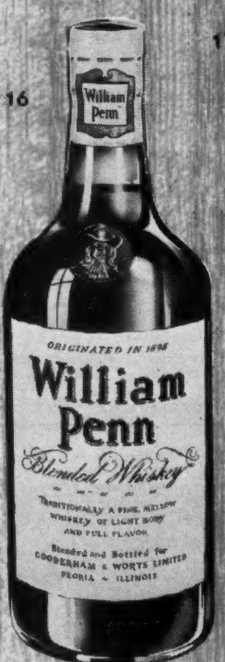
18 Le Galion perfume, packaged in France, is back on the market. The four $^1/_3$-oz. glass-stoppered bottles in an open-front hinge-lid set-up box hold all four scents. Of special interest is the outer decorative wrap—an all-over pattern of galleons to tie in with the trade name. This outer wrap is used on all Le Galion perfumes from the smallest to the largest. Individual bottles of the same design ranging from $^1/_2$ to 4 oz. are also on the market.

19 A picture of a new air-operated saw and file, distributed by Air-Speed Tool Co., tells the sales story quickly on a maroon and gray set-up box. Essential features are told simply in three lines of copy in reverse printing in the upper left-hand corner. Trade name is placed at lower right. Parallel gray lines along the sides complete the design. Simplicity suggests a quality product. The size of the box plus the design features give this package good shelf-stacking possibilities plus high visibility value. Designer, Leonard A. Wheeler, Pacific Designers, Los Angeles. Box, Artcraft Paper Box Co., Los Angeles.

15

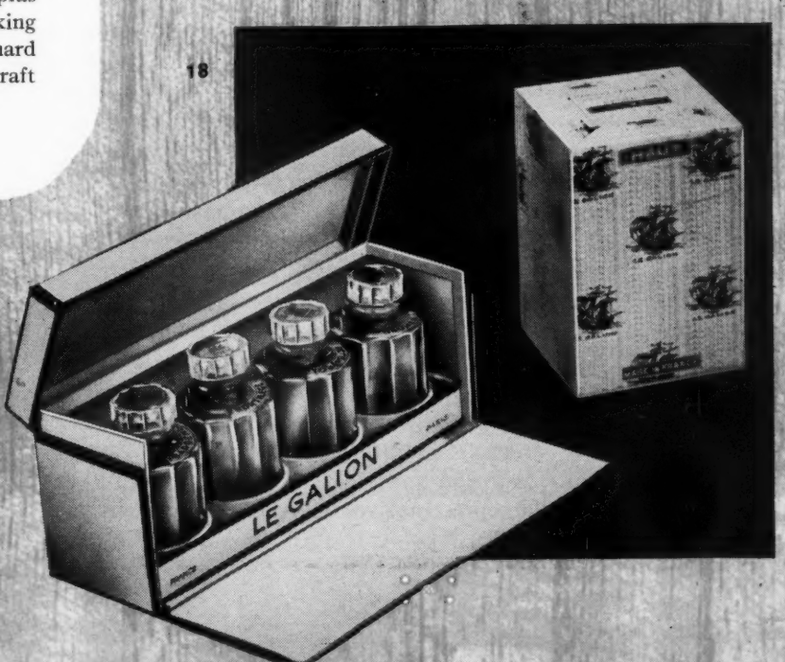


16



17

18



19

1—From cans to shipping cases, Sexton's "Edelweiss" line of institutional foods is dressed up with labels that have a modern, quality look. Stylized lettering of brand name distinguishes new labels, which also have increased white space. Easily read case end-labels facilitate identification of foods in dimly lighted storerooms.

No shelf appeal needed

. . . but John Sexton finds virtues in modern label design for food products sold directly to institutional users

With progressive organizations throughout the country modernizing their packages to win their quota of postwar business, a great deal is heard these days of the impulse sale and its key role in competitive selling. The steady progress of self-service in food establishments, variety and department stores and numerous other lines of business means that the package itself is going to be called upon for an increasingly important share of the selling job.

John Sexton & Co., pioneer manufacturing wholesale grocery organization with headquarters in Chicago, has a totally different sales problem. In fact, since Sexton foods are purchased by restaurant and hotel operators even before they see the merchandise, it might be assumed that this firm would not be too greatly concerned with the matter of package design. Yet this company, during the past 18 months, has undertaken a complete redesign activity covering all its labels and packages. The program, now substantially completed, will be in full operation when the company finishes its 1946 pack.

John Sexton & Co. distributes food and supplies to restaurants, hotels, institutions, railroad diners, camps, clubs, airlines and steamship lines. In normal times, this leading institutional food supplier offers nearly 3,000 food items to the trade, selling its line through a field force of 300 representatives who deal directly with the customer throughout the 48 states. Since none of the Sexton merchandise is sold at retail, the factor of shelf appeal, so vital to manufacturers whose volume is principally through the retail grocer, does not constitute a problem.

However, it is the policy of the company and its president, Sherman J. Sexton, to provide the institutional trade with labels, packages and cartons which are equal in attractiveness and utility to those used by other food concerns. The broad redesign program, while accomplishing this important objective, has also enabled the company to achieve a higher degree of production control over its huge family of labels, creating packaging economies which it is estimated will defray the cost of the entire program in less than two years.

From the standpoint of volume and variety of uses, the most fundamental items in the Sexton packaging line are its distinctive labels, which are wrapped on all metal containers and fibre cans from the one-quarter tuna fish containers to 10-lb. canisters of baking powder, as well as gallon bottles and other glass packages.

Formerly, the line included six different labels, one for each of the various grades of merchandise handled: Edelweiss, printed in black, red, blue and green; La-Salle, including black, red and green; Kenmore, incorporating black, red and green; Two Cities, having

two blues and red; Fleet, composed of red and gold with a special green, and Sexton, in black and red.

One of the principal drawbacks of the old style labels was the fact that each was printed in special colors, with the result that combinations of more than two different brands on labels in the same printing run were not practicable. In line with postwar standardization and simplification of the line, the six brands were consolidated into four—Edelweiss, Sexton, LaSalle and Fleet. The Edelweiss and Sexton labels represent the company's top quality merchandise, while LaSalle and Fleet labels are used to designate the second and third grades. Under the new program, all four labels are printed by offset lithography with standard offset colors—red, yellow and light and dark blue. This arrangement enables the company's labeling department to order combination runs in any size and amount.

The same elements and color schemes of the new design labels have been carried through into the firm's other packages, such as corrugated and fibre shipping cartons, vacuum coffee cans, lithographed tin containers, cotton and paper bags, folding boxes, jar tops and other items. Efforts are also being made to have the designs incorporated in containers of food products which the company imports, such as certain types of sea foods and other specialties. As a corollary of the redesign program, the company's letterheads and interhouse correspondence forms have been altered to harmonize with the new labels, and the Sexton delivery and sales units also carry decalcomania with the motif.

In redesigning the labels, the brand names were changed from a somewhat cold Gothic style of lettering to a new "Old English" type which is dressier and more distinctive. Product names, also previously imprinted in

2—Clean-up of design, typography and color is evident in these old and new labels for bottled chili sauce.

3—Contrasting old and new labels for typical products in "Sexton" line—same family design but color distinct from other three lines. Note how cap-and-lower-case Caslon type for the product name promotes easier reading.

Gothic caps, are now executed in Caslon bold condensed upper and lower case letters which distinguish them from the usual run of label printing. The design for all labels is standard, characterized by upper and lower bands of color with an individual color to denote each family of brand names—blue for Edelweiss, red for the Sexton line (which also bears the family crest), green for LaSalle and rust orange for Fleet. Altogether, there are approximately 175 different labels, used on between 2,000 and 2,500 food items.

About three-fourths of the Sexton labels are printed with the package name, weight statement, ingredient listing and instructions omitted. Some of the imprinting of this final information is handled by the firm on its own presses, while other labels are imprinted by outside firms. The cost of imprinting is figured at about 20% of the entire label cost. Blank labels are now ordered in multiples up to the capacity of the presses.

The former Sexton labels allowed less than 30% of the face area for imprinting product name and related information. If the name was a long one or the list of ingredients lengthy, it was necessary to run them in small type, which was difficult for the customer to read and out of proportion to the size of the brand name and design elements of the label. In the redesigned labels, the blank space for imprinting has been stepped up to approximately 60% of the entire label face, permitting a larger, more legible product name and ample area for directions, recipes, and copy describing related items.

Since the hundreds of Sexton food items are sold by the case, particular attention was devoted in the new program to the problem of case end labels. Here it is important to remember that institutions frequently store foodstuffs in dimly lighted basement areas where the customary stenciled product labels may be difficult to decipher. Recognizing this difficulty, the Sexton firm has adopted large, clearly legible end labels which greatly simplify the task of identification.

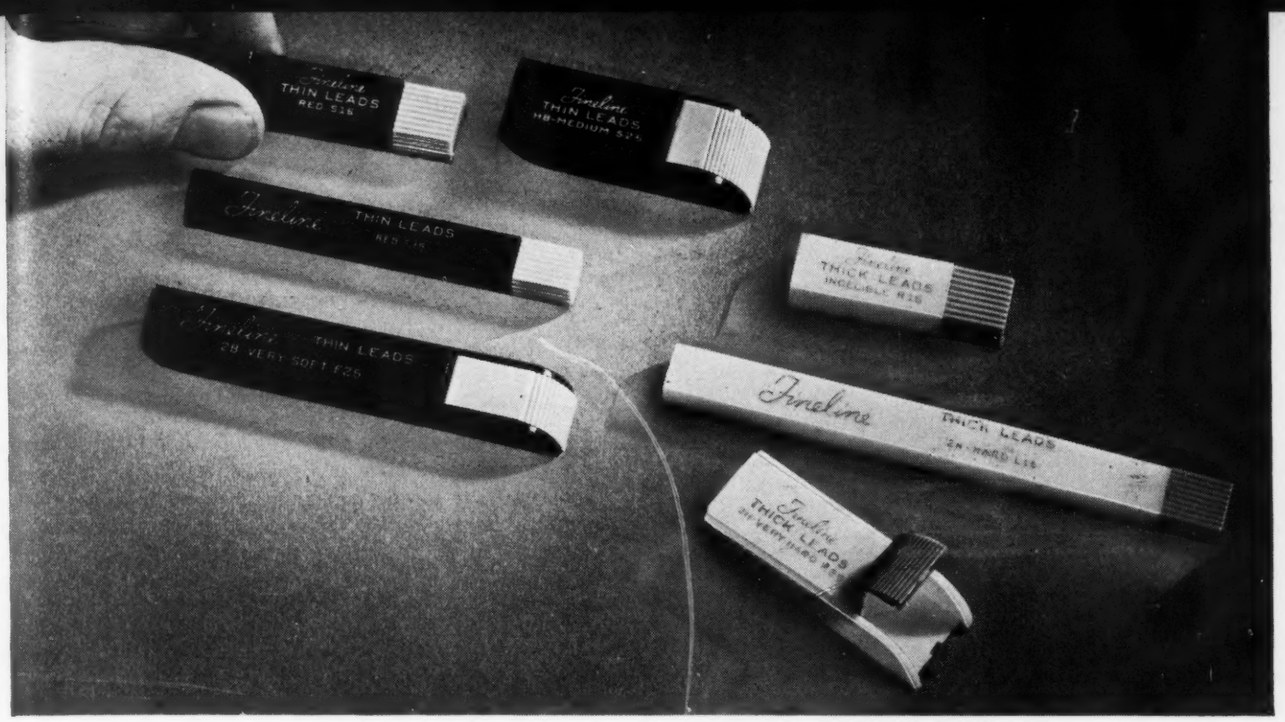
Reduction of the company's brand names from six to four enables the organization to place greater emphasis on its Sexton line and permits more concentrated advertising effort. For example, all merchandise which reaches the ultimate consumer in the package bears the Sexton brand.

While the current John Sexton packaging program is essentially concerned with label revision and simplification, the company is also making some fundamental changes in packaging methods. For certain commodities such as preserves and pickles, the use of glass jars with spot labels, which replaced tin containers during the war as a conservation measure, is being continued because it is felt that the appearance of the packed food itself is the best evidence of quality. On spices, dessert powders, cocoa, nut meats and certain other items, square cans have supplanted round containers because they permit better utilization of storage space and are said to be somewhat easier to handle.

Among the newer containers being projected by the company is a 1-gal. square package which will be used to pack sufficient gelatin powder to make 1 gallon of gelatin when sugar is again available for manufacture of this product. This can, a 4-ply asphalt laminated straight wound moistureproof container, will be labeled front and back with spot labels. It is fitted with a friction type of lid which, combined with the laminated construction of the container itself, offers unusually good protection against moisture penetration.

CREDITS: *Label designs by Ernst A. Spuehler, Chicago. Labels by United States Printing & Lithograph Co., Cincinnati, O. Glass jars by Ball Bros. Co., Muncie, Ind., Hazel-Atlas Glass Co., Wheeling, W. Va., and Owens-Illinois Glass Co., Alton, Ill. Metal caps by the Aridor Co., Chicago, and Trio Metal Cap Co., Chicago. Fibre cans by W. C. Ritchie & Co., Chicago, and American Can Co., New York. Corrugated and fibre cartons by Container Corp. of America, Chicago. Metal cans by American Can Co. Coffee bags and shipping sacks by Benj. C. Betner Co., Devon, Pa.*

4—"LaSalle" and "Fleet" lines complete four brands, reduced from previous six. "Kenmore" and "Two Cities" brands (background) have been dropped. Under the new program, catsup, like other items which reach consumer in original container, carries the Sexton brand name. "Sherman" coffee illustrates adaptation of the new style lettering to Sexton products not carrying one of four principal brand names.



New flip lid (foreground) opens easily, snaps firmly shut—a groove in cover engaging bevel in body. Blue, black and yellow are colors used for these new plastic containers for W. A. Sheaffer pencil leads.

Flip lid . . . plastic containers for pencil leads

A colorful new family of plastic containers has been adopted by the W. A. Sheaffer Pen Co. for pencil leads.

Three of the packages are equipped with new hinged lids called "Flip-Top," which snap firmly shut—a groove in the cover engaging in a bevel in the body of the container.

Snap-on friction caps are used for the other four packages, held securely in place by interlocking dimples molded on body and top sections.

The hinge-type caps are used on the 25-cent packages of leads. Their greatest advantage, according to the company, is in eliminating the danger of losing the cap, and also the convenience with which the package may be opened. Just a slight pressure against the end of the cap will flip it over into an open position ready for removal of the leads from the package and a slight pressure in the reverse direction snaps it back into position.

The Flip-Top lid also permits more ready access to the leads and, the company believes, has a psychological advantage in having a substantial portion of the leads in view at the time of selecting a lead for refilling a pencil. Further, the flip lid has gadget appeal and re-use value for items other than leads. For example, it makes a handy pocket pill box.

The Flip-Top cap also permits great tolerances with safer operation, it is said. In the case of the old slip-type cap, the body portion frequently became displaced from the cap because of comparatively substantial tolerances permitted so that leads spilled in the pocket or in the display case. Attempts have been made to improve this construction by incorporating slight projections in one piece for registration with depressions in the other piece. Due to the comparatively great tolerances required in the molding process, it is also necessary to see that the cap does not fit too tightly, causing a jerking motion in removing the cap that will allow contents to spill.

Two color schemes are used for the package family to distinguish between the different sizes of leads. The packages with the black body portion and the blue caps contain the company's Fineline thin leads of different gradations. The packages with the yellow bodies and blue caps contain Fineline thick leads. The company name is molded on the back of the container, while product information is stamped in contrasting color on the front panel.

The containers are injection molded, some of acetate butyrate and some of cellulose acetate material, but most of them will probably be made of cellulose acetate until such time as butyrate or ethyl cellulose are more readily available.

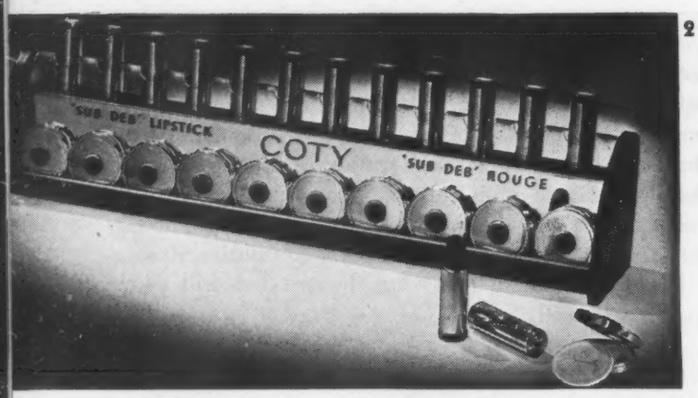
Convenient counter merchandisers of wood and acrylic sheet provide transparent display for these colorful pencil lead containers, arranged with sections designating the various sizes of leads.

CREDIT: *Containers, Injection Molding Co., Kansas City, Mo.*

Display

1

1 Solid comfort is the story which is told without words in this newest window and counter display for Johnson & Johnson Baby Powder and Oil. The appealing baby needs no copy to emphasize the way in which the company's products, simply illustrated in the lower left hand corner, make life happier for the youngest set. Display, Snyder & Black Inc., New York.



2

2 Coty is featuring its Sub Deb rouge and lipstick in this new dispenser display stand essentially for counter use. The base of the stand is of wood, finished in red and black, with the rouge cases displayed against a mirrored silk-screened background. The lipsticks across the top are set into a curved acetate die-cut housing which holds them firmly in place and yet enables both clerk and customer to remove them easily for inspection. Display, Arrow Mfg. Co., Inc., Hoboken, N. J.

3 Luminescence and ultraviolet light are combined to make this fluorescent window display which in this case emphasizes the drama of the title of a book but may also be adapted for use with packaged merchandise. Bright, pale green combined with red fluorescent pigment gives the tiger portrayed on the 22-in. by 28-in. poster a very real quality. A limited number of book jackets were printed on a special paper which fluoresce a bright golden yellow to contrast with the background. Pigments, The New Jersey Zinc Co., New York City. Lithographer, Michael Gross, New York. Inks, Union Ink Co., Inc., Ridgefield Park, N. J.

4 Giftrite, a new, completely packaged ensemble of matched gift-wrapping necessities, introduced by Stanley Wessel & Co., Chicago, uses this upright counter unit both to display the merchandise and to act as a self-service mer-

(*Page 132*)

3

Gallery

chandiser. Packages are die-cut stapled folders which aid both sales clerk and consumer in handling the merchandise. One of the advantages claimed for the display is the minimum amount of counter space which need be devoted to what might be called a complete gift wrap department.

5 The Shelby Tower, made of steel wire, nickel-plated, holds 20 tucks of single-edge blades on one side and 40 tucks of double-edge blades on the other for convenient self-service. The base is 7 in. in diameter and total height is 26 in. Attractively silk-screened in light blue the tower comes in a corrugated shipping carton completely assembled and ready to be placed on the counter. Tower, The Manhattan Wire Goods Co., New York.

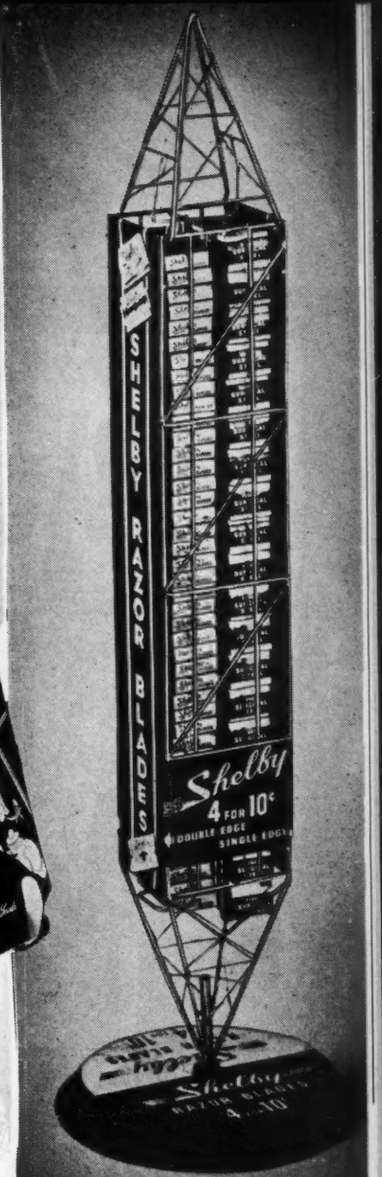
6 This all-acrylic counter display case is being promoted by Revlon for use particularly by the busy beauty shop operator who is eager to make retail sales and increase his dollar profit. The top shelf on which the powder is displayed is stationary but the two lower trays holding lipstick, nail enamel and compacts pull out easily and are fitted with acrylic partitioning to hold the items attractively in order. Acrylic, Lucite, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. Display, Pasadena Plastics Co., Pasadena, Calif.

7 The Emerson Drug Co., manufacturers of Bromo Seltzer, presents a three-piece window display which has several unusual features. The center piece, composed of cardboard and fine net gives the illusion of the girl's head and hand being suspended in air. The giant glasses on the side cards incorporate a patented construction which gives depth to the top. Full-color reproduction gives a quality of realism to the display. Display, Einson Freeman Co., Inc., Long Island City, N. Y.

(*Page 133*)

4

5



6

7

Display Gallery

8

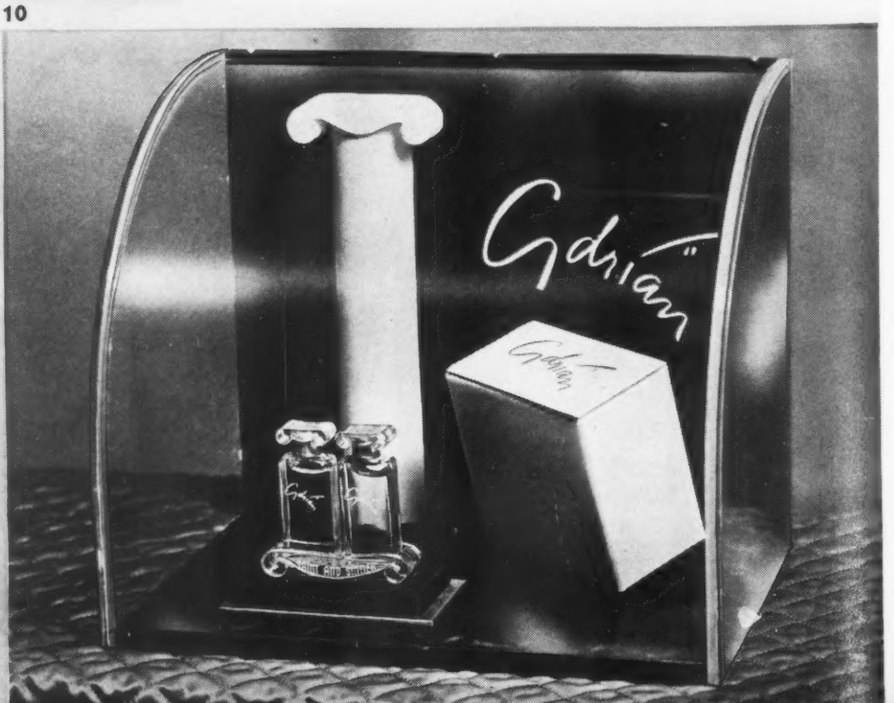
8 "A dress to remember," reads the sell copy of this easel-mounted window display for Talon slide fasteners. A three-dimensional effect is achieved by mounting the die-cut figure of the man on tabs which bring him forward from the backdrop after the stoop has been set up into position. Since Talon fasteners are packaged in different color wraps for different purposes all of the types manufactured are shown along the sides. Small side cards may accompany this piece—each of which tells the purpose of each type of fastener and provides slots for the actual merchandise. Display, Ketterlinus Lithographic Mfg. Co., Philadelphia, Pa.

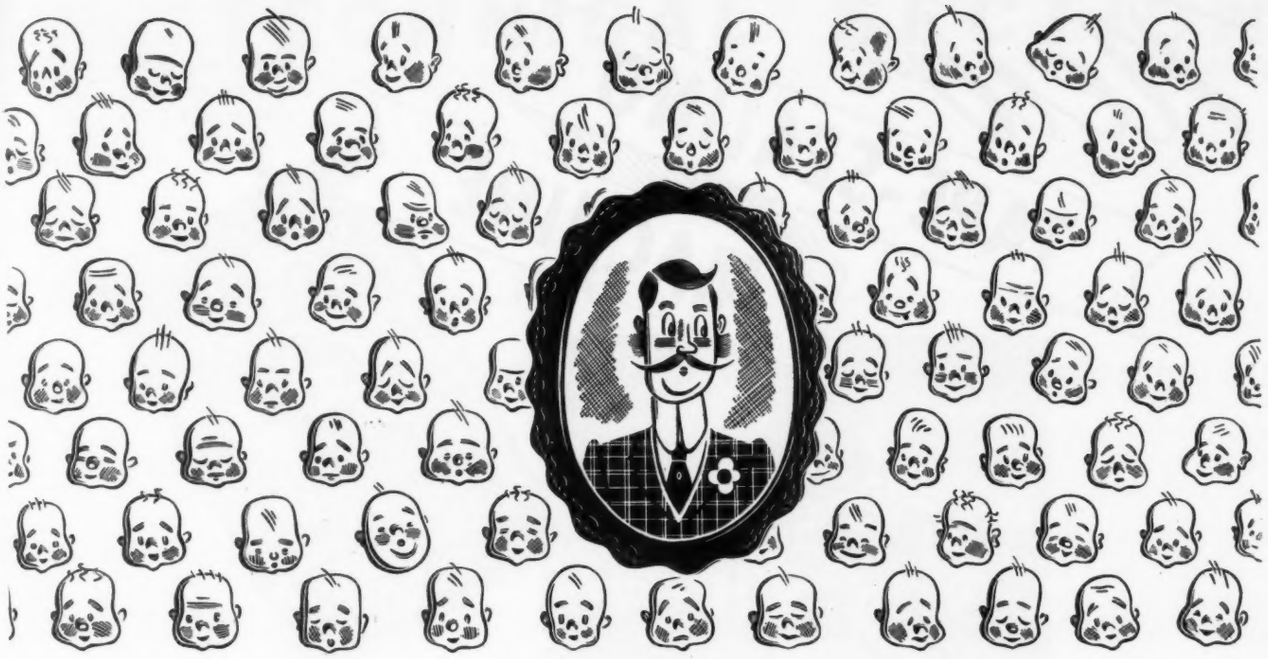
9 A folding carton which opens into a counter unit to display twelve smaller cartons of Superedge, a new type of knife sharpener, is being distributed to retailers by Superedge Products, Inc., Erie, Pa. Red and black with touches of white is the eye-stopping color combination used on both the cartons and the outer package. A photographic reproduction of the actual product tells a how-to-use-it story without the need for copy. Design, Margery Markley, New York. Display Carton, Brooks & Porter, New York. Carton printing, Wagner Folding Box Co., Buffalo, N. Y.

10 An all-acrylic pre-arranged counter display has been adopted by Adrian for "Saint and Sinner" perfumes. One of the advantages of this type of display is claimed to be the assurance which the manufacturer has that the merchandise will be displayed exactly as he planned it because there is no setting up or arranging to be done by the retailer. The backdrop and base of this piece is black acrylic while the rest is transparent. A stylized Ionic column, Adrian's trademark, rises above the two bottles while the box lid is fastened on a slant to accentuate the dramatic effect of the display. Display designed and manufactured by Charles Victor Co., New York.

(*Page 134*)

10





MR. JONES and his MILLION CHILDREN

Mr. Jones is a typical manufacturer of cosmetics. He has sired lipsticks in the million, compacts in equally large numbers. They all look alike, and for that reason they become problem children. Because their packages must look alike, too.

Mr. Jones has quite a problem. He could buy a few hundred thousand packages here and there, bu' he must have them all looking alike, so he comes to F. N. Burt. He knows that we can produce them in the millions to meet his exact specifications—and that the millionth—or the ten millionth—will look exactly like the first. He knows that we keep color samples on hand to effect any possible variations in ink and that our automatic machinery manuf actures packages without a hairsbreadth of variation in size, shape or color.

Mr. Jones and a million children who look alike are all happy and so are Mr. Jones' customers.

Incidentally, you, like Mr. Jones, can profit by Burt's au tomatic production of round, oblong, oval and square setup boxes which are not only uniform but e conomical and speedily manufactured.

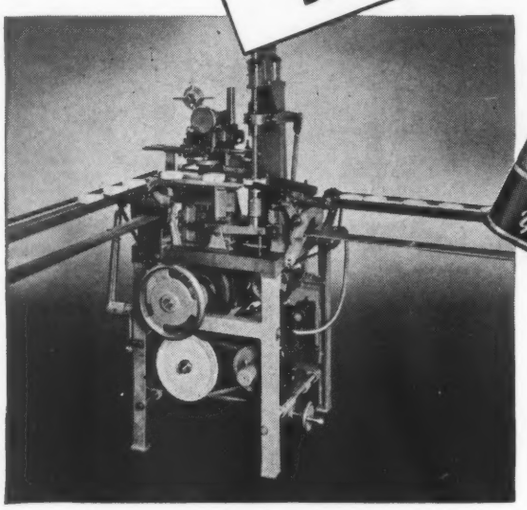
F. N. BURT COMPANY, INC.

500-540 Seneca Street, Buffalo, N. Y.

New York City • Philadelphia • Boston • St. Louis • Atlanta • Chicago • Cleveland Cincinnati • Los Angeles • New Orleans • Memphis • Minneapolis • Kansas City San Francisco, California • Newark, New Jersey

CANADIAN DIVISION:
Dominion Paper Box Company Ltd., 469-483 King St. W., Toronto 2, Canada

New TAPE-SEALING MACHINE



End of seal is left free to serve as easy-opening tab
SIR WALTER RALEIGH
SMOKING TOBACCO FOR PIPE AND CIGARETTES
"Sooner or Later - Your Favorite Tobacco"

Seals containers of tin, glass or other rigid materials

Greater protection against deterioration through moisture loss or gain

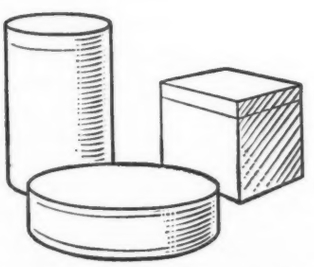
Keeping your product fresh longer should boost sales considerably. And here is an extremely effective and practical way to achieve this advantage.

Using a special type of Scotch Tape, our Nifong Model seals containers at a speed of 25 to 75 per minute, and applies a tab for easy opening.

The tape, which has remarkable adhesive properties, is made of cellophane backed by acetate fiber, and produces a seal that is practically air- and moisture-proof. Tobacco tins, for example, when sealed in this way keep the tobacco fresh for *at least a year,* under normal storage conditions.

The tape is available in a variety of standard colors; and special colors may be had to harmonize or contrast with the color of the container.

The machine is adaptable to various sizes and shapes of containers. If you will send us samples, we will be glad to show you how the tape seal can be adapted to your package.



Banding machine is adaptable to various sizes and shapes of containers

•

Write for complete information

PACKAGE MACHINERY COMPANY
Springfield 7, Massachusetts

30 Church Street, New York 7 • 111 W. Washington Street, Chicago 2
101 W. Prospect Avenue, Cleveland 15 • 849 Marietta Street, N.W., Atlanta 3
443 S. San Pedro Street, Los Angeles 13 • 18 Dickens Avenue, Toronto 8

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

TECHNICAL SECTION

Charles A. Southwick Jr. • Technical Editor

For better usage . . .

3. Terminology of water-vapor transmission testing

by Charles A. Southwick, Jr.

The most important and widely used "chemical" or invisible function of packaging materials is water-vapor permeability. Assuming that the properties of packaging materials can be classified into three general categories, these categories are, in order of their importance:

(1) Physical or mechanical properties.
(2) Decorative or optical properties.
(3) Chemical or invisible properties.

Water-vapor permeability is the most important property in the third category. This property cannot be seen or judged by visual inspection, and because it cannot quickly be determined by simple mechanical means, it is at present surrounded by a great deal of misunderstanding, confusion and indefinite terminology. Even though there is no official method or universal agreement on the test procedure for determining this important property, this does not prevent the correction of certain current practices.

Definitions

It is necessary, first, to define fundamentally the medium under discussion. This medium is *water vapor* or *moisture*. It is incorrect to use the term *moisture vapor*. Water vapor is water in the gaseous phase as distinguished from water in the liquid phase. Moisture is a less precise term and is defined by Webster[1] as: "Liquid, usually water, diffused or condensed in relatively small quantity. It may be dispersed through a gas as invisible vapor or as fog. . ." This definition allows the use of "moisture" to describe the water vapor, either alone or in mixtures of air. It is unfortunate and confusing that the word "moisture" also describes the small amounts of liquid water as is commonly used in describing the water content of a material. However, the word "moisture" is so thoroughly entrenched in common usage as referring to water vapor that it will be accepted as correct to describe this property of packaging materials as *water-vapor permeability* or as *moistureproofness*. Therefore, the words "water vapor" and the word "moisture" should be accepted as interchangeable words.

The commonly expressed value—that is, weight of water vapor transmitted per unit area per unit of time, commonly known as the transmission rating—is actually the permeability of a material. For example: water-vapor transmission rate of a cellophane could be reported as 0.5 gram per 100 sq. in. per 24 hrs., etc. The index of water-vapor resistance of this cellophane would be the reciprocal of this value:

$$\frac{0.5 \text{ gram}}{1} = 2$$

Since there is no unit to describe the resistivity of a material to water vapor, it is difficult to use this term in descriptions or in calculations. It would also cause confusion because the values of resistivity would be large for materials having low values of permeability.

A comparison of water-vapor flow and the flow of electrical currents show many analogous characteristics and formulas. This is clearly brought out by the method which is used to approximate the flow of water vapor across a multiple barrier of materials. For ex-

Because water-vapor permeability is the most vital of all the chemical values of most packaging materials, the need for clarification of terminology and testing methods for WVP is particularly urgent. This is the third of a series of articles by* MODERN PACKAGING'S *Technical Editor on the terminology of packaging. Immediately following is the new Packaging Institute test method for WVP at 0 deg. F.—first of a series of standard testing procedures to be published in this magazine.

[1] Webster's New International Dictionary, Second Edition, Unabridged.

ample: the combined water-vapor permeability of a moistureproof cellophane and a coated glassine used together as a packaging material but not laminated, can be approximated from the transmission rates of the individual materials. Assuming the values of 0.4 gram for the cellophane and 0.7 gram for the coated glassine, the following method of calculation shows the approximate values of the two materials, assuming they are used in close proximity but not laminated:

$$\frac{1}{0.4} + \frac{1}{0.7} = \frac{1}{C}$$

where C = water-vapor permeability of the duplex structure.

$$2.5 + 1.4 = 3.9 = \frac{1}{C}$$

C = approximately 0.25 gram.

This same process can be repeated for multi-layer barriers by using the general formula:

$$\frac{1}{P} + \frac{1}{P_1} + \frac{1}{P_2} \ldots = \frac{1}{C}$$

where C is the permeability of the combined materials and P is the permeability of each layer.

Variables in measurement

Water-vapor permeability or moistureproofness is measured by exposing a specimen sample of known area to uniformly maintained conditions of humidity and temperature during the test interval and measuring by gravimetric or other means the quantity of water vapor which migrated through the barrier. It is apparent from this description that a very large number of combinations or permutations of conditions are possible in a test where there are so many variables. The importance of a few of these variables can be mentioned briefly.

The temperature at which the test is made is important because water-vapor pressure is temperature-dependent although the relationship is not linear. The important consideration is the *actual vapor pressure difference between the two sides* of the test specimen and not the difference in percentage of relative humidity since the latter term is not definitive unless the temperature is specified. Unfortunately, certain important packaging materials based on cellulose (that is: paper, etc.) may undergo certain changes at humidities above 90% R. H. and the generally accepted practice is to limit the high humidity side to values not to exceed this level. The rate at which water vapor flows through a material is dependent on the vapor pressure on the low humidity side and this leaves a great deal of latitude because of the large number of desiccants or absorbing mediums which can be used.

The effect of air velocity over the surface of the sample has never been clearly defined, although it is admitted that air velocity can be a critical factor and that its value must be kept uniform through the test period. Another variable is the distance between desiccant and test specimen, providing a desiccant is used in the test cup. This variable becomes more important the higher the permeability value of a sample. Under no circumstances should it be possible for water as a liquid to come in contact with the specimen during the testing period. It may be that under certain conditions it is important to know the effect of both water and water vapor and if such a test procedure is devised, it could be described as the "water–water-vapor permeability" of a material.

The most important single factor affecting the water-vapor permeability is the temperature. Nearly all the Government specifications and most commercial users agree that temperature of 100 deg. F. is not excessive for the evaluation of materials which are to be used in the temperate or tropical zones. However, sufficient work has been done to demonstrate clearly the error of measuring the permeability of a material at temperatures too widely different from conditions of service. This means specifically that the determinations at 100 deg. F. are not a useful index of water-vapor permeability at frozen food temperatures of 0 deg. F. since the test conditions are too widely different from the service conditions. For example, water-vapor permeability value of moistureproof cellophane taken at 100 deg. F. gives a permeability of 0.5 gram. A thin-gage pliofilm measured under the same conditions shows a permeability value of 1 gram. However, when the same materials were evaluated at 0 deg. F. the permeability value of the cellophane became 0.05 gram and the pliofilm became 0.02 gram. This example shows that the water-vapor permeability can change markedly in temperature and that this rate of change is different for different materials.

All test procedures for determining permeability depend upon the holding of the specimen either in a specially formed cup or a more elaborate apparatus and actually measuring in some manner the quantity of water vapor which passed through the specimen at a given period of time. Unfortunately, all of these procedures developed so far require a considerable amount of time—so much so that even the most rapid methods do not lend themselves to testing for the control of production processes. Work is being done to find a rapid method of evaluation and unquestionably some test will be found which will give an index of water-vapor permeability and which will be accurately calibrated for particular materials. It is probable that such a test will depend upon the measurement of some electrical or molecular property of the material as an index of water-vapor permeability and not upon the measurement of water vapor as actually transmitted.

One of the reasons why current test methods cannot be made more instantaneous is the fact that many packaging materials contain some quantity or water in their make-up. This is particularly true of cellulose structures such as cellophane, glassine and papers and it is necessary for these structures to adjust their internal moisture content so that flow of water vapor through the material can then assume a steady state or rate before the measurements can begin.

Methods of reporting values

Even though there is no official method of determining water-vapor permeability because of the variables and lack of a single and dominant packaging group, there is no reason why certain simple matters of terminology and definition cannot be brought into some more uniform practice. The following is a listing of some of the ways in which water-vapor transmission is or has been reported:

(1) Grams per square meter per 24 hours—100 deg. F., 90% R. H.
(2) Grams per square meter per 24 hours—73 deg. F., 50% R. H.
(3) Grams per square foot per 24 hours—73 deg. F., 50% R. H.
(4) Grams per 100 square inches per 24 hours—100 deg. F., 90% R. H.
(5) Grams per 100 square inches per 24 hours—73 deg. F., 50% R. H.
(6) Milligrams per 24 hours per cm. of Hg pressure difference per mil of thickness.
(7) Pounds per year per thousand square feet.
(8) Grams per mm. of thickness per square meter per 24 hours.
(9) Ounces per square yard per 24 hours—73 deg. F., 50% R. H.
(10) Ounces per 100 square inches per 24 hours—100 deg. F., 90% R. H.
(11) Grams per square inches per 24 hours per 90 deg. F., 90% R. H.
(12) Pounds per square feet per hour per mm. Hg water vapor pressure differential.

Some of these reporting means are so complex that they require skilled mathematicians to interpret the values. Furthermore, because many of them do not report temperatures and other details of the procedures, the values are meaningless to anyone except the laboratory where the test was made. It has been proposed that factors be supplied so that the various methods of reporting results can be calculated to a common condition for comparative purposes. Calculations can be made to correct the area and the weight—that is, from the metric system to square inches or from ounces to grams, etc. However, no other calculations or factors should be used because, as for reasons previously pointed out, there is no constant or lineal relationship between water-vapor transmission rate run at different temperatures, at different vapor-pressure differentials, or many other factors.

Area and weight

Any means for reporting water-vapor permeability values should carry sufficient information concerning the most important variables and some clue as to the procedure used. Such information will be necessary until there is a standard testing method in use which can be identified by a code number or a similar reference. However, there is one factor which in the past has caused considerable contention and that is the matter of reporting the area and weight. There is no reason why any one of the many standard units of area could not be used and any decision in this matter will be somewhat arbitrary but should be dependent upon current practices and a convenient unit. It is unfortunate that the metric system of area is not more commonly understood or used in this country; otherwise, the square meter would be a very convenient unit of surface. However, packaging calculations and measurements are usually based on the inch and so the most convenient unit of area is 100 square inches.

It is absurd to consider the use of the English weight system of ounces, pounds, etc., as a means of reporting weight because the units are awkward and difficult to handle, as well as the fact that all laboratories do fine weighings on balances calibrated in the metric unit of grams. Furthermore the use of grams in reporting the weights of contents of packages and for other industrial uses is becoming more widespread.

It is admitted that such a method of reporting results containing both English and metric units is open to criticism on theoretical grounds but such usage appears to have the widest acceptance today and is a convenient and easily used value.

A suggested method of reporting water-vapor permeability which appears to cover the major variables of procedures and common use is as follows:

"Water-vapor permeability shall be expressed as grams per 100 square inches per 24 hours at (specify) deg. F. and (specify) Relative Humidity with (specify desiccant) used in the cup or as grams per 100 square inches per 24 hours at (specify) deg. F. and (specify) water-vapor pressure differential."

What is "moistureproof"?

Another important consideration is the use and definition of the word "moistureproof" to define the degree of water-vaporproofness. It is apparent that some value must be fixed below which materials can be considered moistureproof and above which they should not be described as moistureproof. Here again, it will be necessary to fix arbitrary values which appear to be in line with commercial practices.

A review of the water-vapor permeability of a large number of packaging materials will show that materials used for the packaging of products which need protection against gain or loss of moisture will have values of less than 1 gram per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential. However, there is a class of packaging materials which is useful for the packaging of products which are only slightly affected by water vapor and these are being successfully packaged in materials which show permeabilities somewhat over 1 gram.

The following definitions of "moistureproof" appear to be in keeping with current packaging uses:

A moistureproof material may be defined as having water-vapor perm-(*Continued on page 172*)

Standard Test Methods

1. For water-vapor permeability at 0 deg F.

The need for recognized and reproducible standard procedures for testing packages and packaging materials has long been apparent. MODERN PACKAGING *has itself considered the preparation of a set of testing methods which it could recommend for universal adoption. But it was felt that this job should more properly be undertaken by a cooperative group directly representing all branches of packaging activity.*

Commendation is due Packaging Institute for having taken up the task. For two years its Technical Committee—under the leadership of MODERN PACKAGING'S *Technical Editor, C. A. Southwick, Jr.—has been engaged in sifting through existing test methods to arrive at procedures which would be acceptable to all.*

A set of nearly 30 such procedures has now been completed and will be issued soon to members of Packaging Institute, subject to their approval. It is to be hoped that they will become the common language of all packaging laboratories.

MODERN PACKAGING *considers it a privilege to help this important work along by printing texts of a number of the new recommended PI "Standard Test Methods." The first of the series appears herewith; others will follow in succeeding issues.*

1. Definition

The rate of water-vapor transmission of materials (i.e., permeability) is the weight of water vapor transmitted per unit of area in unit time under constant conditions of water-vapor pressure differential at 0 deg. F.

2. Intent and scope

In packaging it is necessary to determine the rate of water-vapor transmission in order to establish specific values for materials for the packaging of products which must be protected against moisture absorption or loss. The method lends itself well to the evaluation of thin membranes which may be used for the packaging of quick frozen foods.

3. Apparatus

A. Inner Cabinet—A heavy walled (not less than 14 gauge) substantially sealed metal box in which the test dishes are racked in groups of 4, approximately 2-in. spacing below the bottom of the bottom sample and over the top surface of the top sample, with one inch clearance between the top of one specimen and the bottom of the test dish above. The metal box may hold any number of such units, provided that each rack of four is surrounded on the sides by coarsely cracked ice (the top and bottom need not be iced). This can best be done by quarter-mesh screen surrounding the racks which hold the specimens. The purpose of the tightly sealed box of heavy metal is to minimize the temperature variation from the storage cabinet and to reduce convection currents. The temperature within the box should be 0 deg. F. plus or minus 2 deg. (See Figs. 1, 2.)

B. Outer Cabinet—This should be a frozen food storage cabinet, preferably the dungeon type with cooling in the walls. The inner cabinet should be in place 2 in. off the bottom on wood or other insulating support and at least 2 in. away from walls. The outer cabinet should be capable of holding its temperature within plus or minus 3 deg. F.

4. Reagents and accessories

A. Test Plates—An aluminum dish allowing a sample area of 20.63 sq. in. and of such design as to allow a strong sealing of specimen by wax with no danger of vapor leakage or edge migration.

After each usage the dishes are washed first with soap and water to remove all traces of calcium chloride and then with toluene or Benzo-Sol (a light petroleum fraction) to remove any particles of wax. Under no circumstances should the aluminum dishes be chilled before preparing the samples, etc. The dishes are numbered clearly A-1, A-2. . .A-6; B-1, B-2. . .B-6, etc. A-1 and A-2 contain duplicate samples taken from different parts of the same material. This applies to all pairs—A-3 and A-4, etc.

B. G.F.W.V.T. Desiccator (Scientific Glass Apparatus Co., Bloomfield, N.J.)—the bottom of a standard 6-in. desiccator and a bell jar which is 17 in. high overall is used as a top part. A frame of metal shelving fits into the desiccator so as to hold 12 aluminum dishes. Anhydrous calcium chloride, 8 mesh, is used at the top and bottom. Water vapor being lighter than air rises to the top and, therefore, a desiccant should be used at the top as well as at the bottom. Renew the calcium chloride every two weeks.

C. Anhydrous calcium chloride (approximately 8 mesh)—50 cc. by volume per test dish. The calcium chloride should be brought to 0 deg. F. before use.

D. Wax—The wax must not check, crack or release from the metal cup in going through the temperature

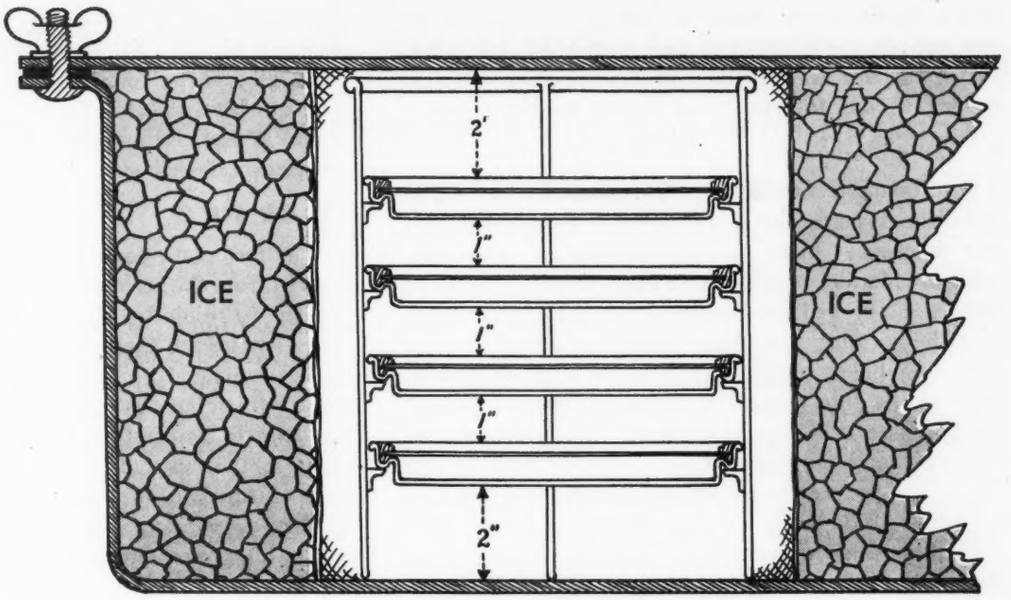


FIG. 1 SIDE VIEW

1—Inner cabinet must be a heavy-walled, sealed metal box, as shown in this cross-section. Test dishes are racked in groups of four, with 2 in. spacing at top and bottom and 1 in. clearance between.

cycle from room to zero, etc. Any wax mixture or formulation which has proper tack, stability and tensile strength can be used. The most satisfactory wax tested is one made by Package Materials Laboratories, 12–28 Broadway, Long Island City, N. Y.

E. A metal template with a $5^{1}/_{4}$-in. diameter on the upper surface tapering to a $5^{1}/_{8}$-in. diameter on the lower surface through a depth of $^{5}/_{16}$ in. Three or four metal ears project from the surface, serving to center the lower surface of the template concentrically with the inside peripheral edge of the plate. They also provide a support for leverage that is applied to lift the template after the wax hardens. The template is chilled to 0 deg. F. before using.

F. A suitable die-cutting tool, $5^{5}/_{8}$ in. in diameter, shall be used to cut the samples to a uniform size, without the said die disturbing the surface characteristics of the material.

G. Analytical Balance—Accuracy not less than plus or minus 0.0005 gram.

H. Miscellaneous—

(1) Solder iron, flat iron or other electrically heated device.
(2) Petrolatum.
(3) 40-mesh copper screen for straining wax impurities.
(4) Screw driver.
(5) Metal pot mounted with a 360 deg. F. thermometer.
(6) Sharp knife.

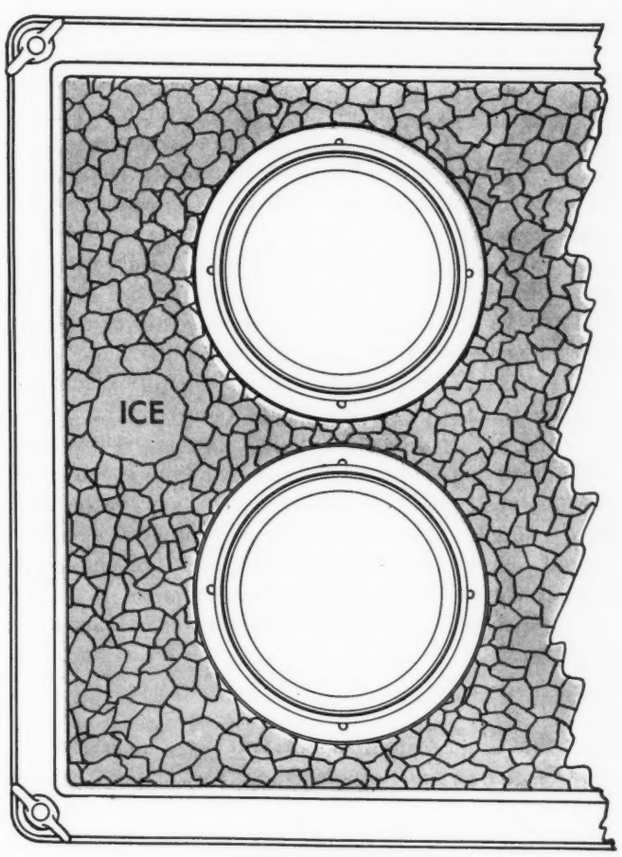


FIG. 2 TOP VIEW

2—Cabinet may hold any number of test units, as long as each rack of four dishes is surrounded on all sides by coarsely cracked ice as shown. The top and bottom spaces need not be iced. Quarter-mesh screen surrounds the racks which hold the test specimens in position. Box must be tightly sealed to minimize temperature variations.

5. Test sample

A. Sampling—Test specimens shall be representative of the material being tested. The paper is inspected for flaws, pinholes, etc., that are not normal to the material and then a representative section of about 6 in. square is selected. The sample is then die cut to

$5^5/_8$ in. in diameter. Since the test is run in duplicate, two samples are taken from each material to be tested.

B. Preparation—All the samples are held at 0 deg. F. long enough to bring them to that temperature.

6. Test procedure

A. Standard Conditions—The preparation of the test dishes is performed in a continuous cycle with speed and precision. Fifty cc. (by volume) of anhydrous calcium chloride, previously brought to a temperature of 0 deg. F., poured into each test dish and spread evenly over the bottom; the chilled sample is placed in position, the chilled template is centered and allowed to come gently into contact with the specimen. Before the template is chilled, it is given a slight film of petrolatum along the outer surface which contacts the wax. The purpose in having the sample template and calcium chloride brought down to 0 deg. F. is to reduce the pull on the wax seals which would be developed by the sample contraction if the sample were sealed in at room temperature. The wax mixture is poured at 200 deg. F. into the annular space between the template and rim of the aluminum dish, filling up this space to within $^1/_{16}$ in. of the top of the dish. It is desirable to have the whole assembly at this stage on a small turntable arrangement so that the liquid wax can be poured along the entire circumference of the trough. The assembly is left to stand until the wax congeals. They are then placed in a refrigerator for about five minutes in order to harden the wax sufficiently so that the templates may be removed.

The template is removed by prying carefully with the screw driver, giving a slight twist that presses the wax against the aluminum dish. The template is released and is easily lifted off the plate without causing any injury to the membranes or to the seal. (See Fig. 3.)

After the templates have been removed, the dishes are carefully examined for flaws. If there is any sign of fracture or parting of the wax seal from the edge of the test dish, apply sufficient heat along the outside edge with a soldering iron, flat iron or other electrically heated source rather than a direct flame, which would tend to deposit soot, etc., on the specimen.

The dishes are then placed in the zero cabinet for four days. The samples are placed in the racks in numerical order, dishes A-1. . .A-6 in the first rack, starting with A-1 at the top, B-1. . .B-6 in the second rack, etc. After four days the dishes are brought out and quickly inspected for any sign of flaw in the wax seal. If there is any failure, it is mended in the manner previously described.

WARNING

The test plate must be very quickly and gently removed from the zero atmosphere and placed in the desiccator to minimize the condensation from room air. The samples are then racked up in the desiccators, the plates so arranged on the racks that the proper order is kept throughout the entire test, facilitating the records that are to be established for each. The samples remain in the desiccator until they have come to room temperature and any surface moisture has been completely evaporated. This may require as long as 24 hours and, therefore, weighings to the third decimal place are made at two-hour intervals after the twelfth hour. As soon as constant weight has been obtained, the test dishes are returned to the inner cabinet at 0 deg. F., again in proper order and exposed for 28 days. At the end of this time, the samples are removed from ice cabinet, and desiccator weighing cycle repeated.

The samples are then removed from the plate by heating them for a short time on a hot plate in order to melt the wax and provide the release of the material from the plate. The calcium chloride is discarded and the plate is washed with water and solvents to remove all traces of the above-mentioned materials.

7. Calculations

Water vapor transmission rate is equal to gain in weight expressed in grams times the factor 0.173. The factor 0.173 is arrived at in the following manner:

$$\text{Factor } \frac{100 \text{ sq. in.} \times 24 \text{ hrs.}}{672 \text{ hrs. exposure} \times 20.63 \text{ sq. in.}} = 0.1736$$

The duplicate values are then averaged.

8. Precision and reproducibility

The method and equipment as above described should give results within plus or minus 10%. Greater deviations indicate that (*Continued on page 172*)

Test plate is aluminum dish allowing sample area of 20.63 sq. in. and of such design as to permit strong sealing of speciman by wax. The dish contains 50 cc. of anhydrous calcium chloride, brought to 0 deg. F.

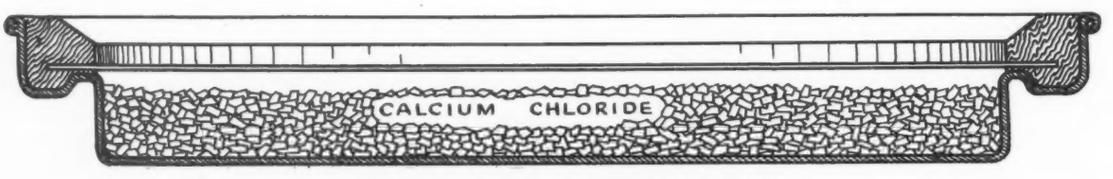


FIG. 3 CROSS-SECTION VIEW

Food packaging studies

2. Water-vapor protection by certain non-metal packages*

by R. E. Thomas, R. F. Brooks and G. J. Hucker

Although sufficient durability to permit the essential handling of bulk packaged fruits and vegetables is of primary significance, the continued protection of dehydrated foods against moisture absorption under conditions of high temperature and relative humidity is of utmost importance. Not only is the water-vapor transmission rate of the packaging material a factor in such protection, but an important factor is the fabrication of the container to insure maximum protective action. The efficiency of the final fabricated container also may be dependent upon its size and the weight of the food packaged. One type of moisture-resisting sheet may be adaptable for unit packages while a much more rugged sheet with an efficient closure is necessary for a bulk package carrying 20 to 50 lbs. It is the object of the present study to determine the water-vapor protection in bulk packages of dehydrated foods by certain packages now available for commercial use.

Procedure

A total of 163 cartons and 24 metal control containers of dehydrated beets and carrots were packaged. Following the handling procedure, according to the Brooks, Thomas and Hucker (1946)[1] methods, 83 packages were stored at 90 deg. F., with 90% R. H., and 82 at 120 deg. F., with 50% R. H. Moisture determinations were made at the end of one month, three months and six months. A further series was stored at 90–111 deg. F., with 75–72% R. H., with moisture determinations at the end of one and three months.

Six different types of bulk packages were used, viz., (a) laminated foil-kraft-asphalt-cellophane; (b) triple-laminated cellophane; (c) creped kraft laminated with asphalt; (d) same as (c) but with an additional lamination of foil; (e) single fibreboard carton double-dipped with wax; (f) double cartons each double-dipped in wax. The detailed specifications have been outlined by Brooks, Thomas and Hucker (1946).

Data

It was obvious in studying the results (Table I) pertaining to the water-vapor protection of bulk packages for dehydrated vegetables that none of the types of non-metal packages studied were as effective as metal. Inasmuch as these bulk packages had been subjected to rough handling prior to storage in the conditioning rooms, it is to be assumed that much of the failure in the final bulk package may be due not to the inefficiency of water-vapor protection by the basic materials but to the lack of durability in the final fabricated package. Effective fabrication, particularly closure, and durability of the package assume an importance in water-vapor protection almost equally significant to that of the moisture transmission rate of the material to be fabricated.

It was noted in the case (*Continued on page 174*)

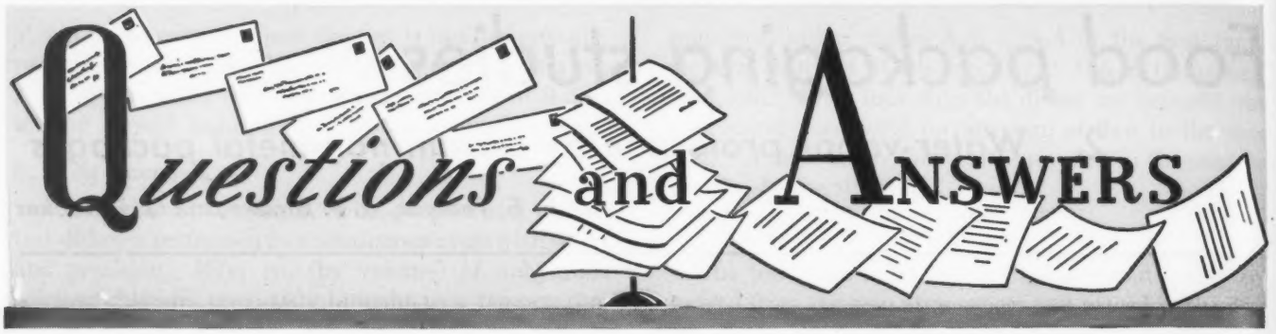
TABLE I—RELATIVE INCREASE OF MOISTURE CONTENT OF DEHYDRATED BEETS STORED AT HIGH TEMPERATURES AND HUMIDITY PACKED IN NON-METAL CONTAINERS

Packaging material	*Number of cartons*	*Moisture content average as per cent of original*[2]		
		33 days	*96 days*	*182 days*
		90° F., 90% R. H.		
Kraft-asphalt-foil laminated	12	105	95	116
Triple-laminated cellophane	12	119	114	145
Heavy duty X-creped kraft	12	104	107	141
Heavy duty X-creped kraft laminated with foil	12	102	101	126
Single wax-coated rigid container	11	103	134	197
Double wax-coated rigid container	12	93	109	153
Tin can control	12	100	100	100
		120° F., 50% R. H.		
Kraft-asphalt-foil laminated	12	117	135	150
Triple-laminated cellophane	10	99	114	163
Heavy duty X-creped kraft	12	126	128	186
Heavy duty X-creped kraft laminated with foil	12	125	132	157
Single wax-coated rigid container	12	113	128	157
Double wax-coated rigid container	12	111	124	151
Tin can control	12	100	100	100
		90–111° F., 75–72% R. H.		
Heavy duty X-creped kraft with latex	6	101	135	...
Heavy duty (triplex) X-creped kraft laminated with foil	6	97	111	...
Laminated foil and X-creped kraft	6	95	110	...
Wax-dipped rigid container in cleated case	4	115	169	...

[2] Original varied from 3 to 4% depending upon lot of dehydrated beets used.

* Journal Paper No. 656, New York State Experiment Station, Geneva, N. Y.

[1] Brooks, R. F., Thomas, R. E., Hucker, G. J., "Food Packaging Studies. I. —Durability of Certain Non-metal Materials for Bulk Packaging," MODERN PACKAGING, June, 1946, p. 152.



This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.

End-printing set-up boxes

QUESTION: We are manufacturers of sewing thread and are interested in securing information about printing machines that can be used for imprinting color and number of the thread to the ends of set-up boxes.

ANSWER: There are several companies specializing in the manufacture of simple types of presses for post-printing various kinds of materials or packages. Some of these machines are quite elaborate and will print in more than one color and will use a variety of ink compositions. The simplest way to perform this operation would be, of course, the use of a rubber stamp but this type of equipment has many limitations as to the type of ink which can be used.

Certain box surfaces may have lacquer or cellulose acetate laminations and these require special solvent type inks for durability of the printed impression.

Most of these units are capable of embossing the surface or of printing one or more colors of a simple design. It is, of course, preferable that you use a solvent type ink for some of these operations since you can maintain a high rate of production and use the boxes with a very brief drying cycle. However, you may find considerable operating problems in connection with color reproduction if you attempt to imprint the thread color as a panel on the ends of these boxes.

I suggest that you clearly define your particular problem to the list of manufacturers of such printing equipment which we are sending to you under separate cover.

Greaseproofness for frozen foods?

QUESTION: We contemplate the manufacture of a material which can be put on paper to make it extremely greaseproof. This coating is also flexible at low temperatures and we are interested in knowing whether or not such a treated paper structure will be useful for frozen food packaging.

ANSWER: The fact that paper treated with your process and materials will have low temperature flexibility does, of course, make it eligible for use in the frozen food field where this property is of extreme importance.

However, if such treated paper does not have any other functional properties than greaseproofness it would not serve a useful function in the packaging of frozen foods. Greaseproofness is not a requirement for materials which are to be used in the packaging of frozen foods because of the fact that at the temperature of storage (0° F.), oils and fats are in a solid state and, therefore, do not stain or penetrate through the package materials. Meat, pork products and any other high fat content foods are not held sufficiently long at room temperatures to make it worthwhile to use a packaging material which is of excellent greaseproofness.

If you wish to develop a material for use in the frozen food field, it should have low water-vapor permeability when measured at 0° F., resistance to disintegration and penetration by water. For some package uses it is desirable that coatings be capable of making strong heat seals. If your coating has some of these properties, it would find many applications in the frozen food field but if it only possesses greaseproofness, you would be well advised not to spend time or money in promoting its use for frozen foods.

Package for calf food

QUESTION: We are in the business of manufacturing a powdered food compound for use in feeding baby calves. This product is designed to be dissolved in water and used as a baby food to take the place of the cows' milk in raising calves.

We have for some time been considering packaging this product in a hermetically sealed container with the thought that we might be better able to maintain it in a fresh condition. We have been advised that there is a tendency to deterioration in food of this type when hermetically sealed.

ANSWER: From the analysis you have submitted, it is evident that your product contains a small quantity of fats, high concentration of oil soluble vitamin and a variety of flavoring materials. These classes of materials are extremely sensitive to destruction by atmospheric oxygen with the (*Continued on page 170*)

It displays what it protects...

...that's why Eastman Acetate Sheet does such an effective selling job

Packages of Eastman Acetate Sheet, heavy-gauge for long wear, do much more than protect stock against dust, shopwear, handling . . .

Individual "show-cases," of sparkling optical clarity, they present products attractively, at their most convincing best. They help customers to choose, to buy. And they give merchants the kind of display they want . . . the kind that helps them to *sell* . . .

The versatility of Eastman Acetate Sheet, its toughness, transparency, and dimensional stability give it many other packaging uses. It can be drawn, beaded, folded, scored, crimped, stapled, and joined with solvent-or glue-type adhesives. Beautiful printed effects are readily obtained. Rolls or sheets are supplied in varying gauges, and in three types—clear transparent, matte, and colored translucent.

Cellulose Products Division
Eastman Kodak Company, Rochester 4, N.Y.

While our current supply is inadequate to meet the increasing demand for Eastman Acetate Sheet, the Kodak Transparent Packaging Laboratory in Rochester is available for demonstrating methods of fabrication.

EASTMAN ACETATE SHEET

Attracts . . . Protects . . . Sells

Kodak

WASHINGTON REVIEW

● **Scarcity and Confusion**—Long delay in action on the price control bill, the many strikes to which the nation has been subjected, and a dozen other factors, have combined to make the current container picture one of short supply in many fields, with a general aura of haziness.

There are indications that some of the snarls may begin to right themselves toward the end of this month, when export demands may be more nearly determined, and when Congress, gone home for a rest, will not be here to threaten the *status quo*—at least, the container manufacturing and using industries will know approximately where they stand for a few months to come, but it will be the end of the year before the picture may be entirely clear for all concerned.

OPA, even before action on Capitol Hill on the control bill, had been granting price increases to many items in the packaging field, which eased the situation somewhat in those particular departments. It was understood early this month that a number of other packaging materials were in for ceiling increases.

● **Help for Adhesive Makers**—Through a CPA directive, wet corn millers, who produce most of the adhesives used in packages and containers, are now getting steel drums for their product. Because they weren't getting the drums, the millers applied to CPA, which in turn issued a directive to manufacturers making 110,000 drums available to the particular users.

Observers here say that a similar action may be taken in order to get enough box shook for fresh fruit, as well as cans and shipping containers for export of canned meat, evaporated milk, frozen eggs, and similar products.

● **Glass Containers Remain Frozen**—With little relief in sight in the direction of tin, which makes use of standardized glass containers almost obligatory, it appears unlikely that there will be any lifting of controls on the manufacture of glass bottles, jars or other shapes this year. Consequently, there is little chance that cosmetics and toiletry packers, brewers, food packers or any other normal users of glass will be able to adopt new designs for bottles and jars for at least six months.

CPA's control on glass container manufacture not only restricts the use of molds for new designs (thus saving pig iron), it lays down strict standards for the containers made, and, in addition, freezes all designs.

Many appeals have been filed with CPA for authorization to make new design containers, particularly in the cosmetic and toiletry fields. Under the order (L-103) it has been necessary to deny virtually all of these, CPA reports.

The industry's goal for 1946 is 110 million gross of glass containers—an all-time high—against estimated requirements of 130 million gross.

Container capacity is still inadequate, even though 85% of all tin mill products production has been set aside for the container needs of the various seasonable and perishable food items, drugs, and biologicals.

Already existing container shortages were made even more severe by the aftermath of the coal strike, which brought about curtailment in production of glass containers as well as allied industries producing soda ash.

● **Paper for Containers**—More than 5% of the entire United States paper production—including, of course, all types used in making containers, labels, wrappings and other packaging applications—has been removed from the general market during the past year through the sale of a score and a half of mills to publishers and to manufacturers of paper products who established the mills as parts of integrated set-ups, according to figures made available by Government agencies and compiled by the National Paper Box Mfgrs. Assn. Rated total production of the mills that have changed hands is well over a million tons a year. Total production of paper and board last year in this country was nearly 19,000,000 tons, and the current rate of production is at about the same level.

Also contributing to the shortage of board is the fact that, in swinging over to housing production, many mills which previously made materials used in packaging are now making liner stock for producers of gypsum board and gypsum lath. As a result, many box-makers are having to close for lack of materials for days at a time. The unsettled labor situation has also cut into the container board picture.

● **Adhesives Short**—Added to the critical board situation is the shortage of adhesives and box shops are also facing shutdowns for want of this essential element in box making.

Civilian Production Administration, however, has announced a plan, worked out with Agriculture department, which should be effective in relieving the industrial cornstarch shortage, which is the primary reason behind the adhesive shortage. Under the plan, Agriculture department is lending sufficient corn to wet millers to enable them to continue production on a minimum basis. To assure that this production reaches those industries needing it most, CPA has drawn up a list which the wet millers are using on which to base their shipments of starch made as a result of the corn loan. The various phases of the container industry stand high on this list.

● **Cans for Famine Products**—To speed the Famine Relief Program, CPA is now permitting packers of meat under the program to order tin containers in advance of delivery of the meat products. Previously, it had been necessary for each packer to obtain special authorization from CPA before ordering containers, a procedure which reflected back on the ability of can manufacturers to schedule tinplate deliveries with the steel mills without this special authorization, thus resulting in a considerable loss of valuable time.

● **"Get out the Scrap"**—Everyone who has an interest in getting higher steel production—and through it the production of the items they need, should turn a hand to getting all the steel scrap possible to the mills, according to the American Iron and Steel Institute. Strikes and other dislocations, the institute points out, have so slowed down the flow of scrap to the mills that supplies are little better than in 1942 when some open hearth furnaces were idle because of lack of scrap.

● **Burlap Shipments**—Almost a billion yards of burlap have been purchased privately in India for shipment to the United States during 1946 and the first quarter of 1947.

Millions of people in Europe and Asia will die of starvation unless we help by sharing our abundance now! You can help save them by giving to the Emergency Food Collection. Give money or give food canned in tin. Give today that they may live.

WILL YOU GIVE THAT THEY MAY LIVE?

HERE'S WHAT YOU CAN DO!

1. GIVE MONEY TO BUY FOOD.

More food can be obtained for a given amount of money when it is bought centrally and in large quantities. Send money to your local Emergency Food Collection Committee or to Henry A. Wallace, National Chairman, 100 Maiden Lane, N. Y. 7, N. Y.

2. GIVE FOOD IN TIN CANS.

Leave at any Emergency Food Collection depot.

Urge your church, club, or organization to participate!

Why food must be in tin cans. Food in tin cans can be handled safely for distant shipments and travel over difficult roads.

There is a long, tough, important journey ahead of these Crown cans—they are going to help feed the starving. These cans will stand up to the task assigned . . . affording maximum protection to the food entrusted to them—for like all Crown cans they are of the highest quality.

Maximum protection for *your* product is not the only thing you get when you use Crown cans . . . you also get "personalized service"—the sincere, useful interest in your packaging problems—the "headquarters interest" and help from Crown officials, sales representatives and field service men that Crown customers find exceptionally profitable.

CROWN CAN

THE NATION'S THIRD LARGE SOURCE OF SUPPLY

CROWN CAN COMPANY • PHILADELPHIA • Baltimore • Chicago • St. Louis • Houston • Orlando • Fort Wayne • Nebraska City

Equipment and Materials

WINDOW BAG FOR PREPACKAGED PRODUCE

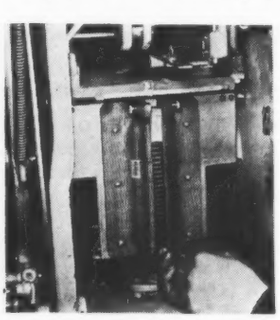
The trend in the merchandising of prepacked fresh vegetables and fruits has brought forth many new and improved types of bags. The Union Bag & Paper Corp., New York, has developed a wet-strength kraft paper bag with a "window" of cellophane for this purpose. Whereas the ordinary paper bag would become saturated from the moisture on the fresh vegetables, this new bag absorbs the moisture without disintegrating or breaking and regains its full strength when it has dried. This permits the prompt packaging of the produce while it is still fresh — either in warehouses or in the retail stores — and is a large factor in the reduction of waste. "Window" permits buyer to see the quality of the product, and the printing in bright colors enhances sales appeal.

DOUBLE-DRIVE ROTARY HEAT SEALER

Pack-Rite Machines, Milwaukee, Wis., announce the development of a double-drive rotary heat sealing machine for bags and pouches. Thermostatically controlled to seal a wide range of heat sealing materials, the machine operates horizontally, vertically or at an angle and can seal any length bag, pouch, barrier, etc. The double drive, or driving of both sealing roller shafts, is said to eliminate pulling or distortion of the bags as they travel through the rollers. Seals up to 300 or more lineal inches per minute, depending on material being sealed. Wiring is directly to stationary ring heating units under transite plates covering both sealing rollers. A simple tension adjustment is provided for pressure on rollers, and sealing krimps may be vertical, horizontal, checkered or flat seal. Machine is lightweight and compact — approximately 19 in. from front to back; 9 in. from left to right and 9 in. from mounting base to top.

REINFORCED PLASTIC FOR LABELING MACHINES

Moldings of American Cyanamid Co.'s Laminac resin and fiberglas cloth have been adopted for label holders on packaging machinery. The hopper for labels, known as change parts, presented a problem to the New Jersey Machine Co., manufacturers of precision labeling machinery, because of the complexity of shapes and sizes which must be handled quickly and accurately. The problem was solved by Laminated Plastics, Inc., Cleveland, Ohio, producers of glass-cloth-resin-laminates, called Glastic. This company understood the development and production of the parts required, and, because of the suitability of this low-pressure resin to inexpensive molds, was able to produce the necessary small runs economically. Parts are said to be entirely satisfactory as far as strength, wearability and appearance are concerned compared to other materials. The technique, the makers claim, is well suited for use on packaging, printing and other production machinery where special parts are required in relatively small quantities.



IMPROVED CASE NUMBERER

Now in production for immediate delivery is the improved case numberer by Wm. A. Force & Co., Brooklyn, N. Y. The new unit utilizes impregnated plastic for the wheels with aluminum for other major structural parts, making a lighter and easier to handle unit. The plastic composition is a cloth-impregnated phenolic said to be highly resistant to the chemicals used in the special inks necessary in order to print uniformly and clearly on wood or carton board by means of the unit's rubber characters.

SHOCK-TESTING DEVICE

The G-Meter, Model 270, designed and made by Frederic D. Schottland, Kew Gardens, New York, provides a measurement of the maximum, instantaneous shock in terms of gravitational units. The meter consists of two parts, the G-Meter itself, which is subjected to the actual shock, and the electronically operated indicating mechanism. This device differs from existing means of shock testing, its maker claims, in that it measures shock reaching the object under observation through elastic as well as inelastic media. Furthermore, the effect may then be investigated under actual and not simulated conditions of application.

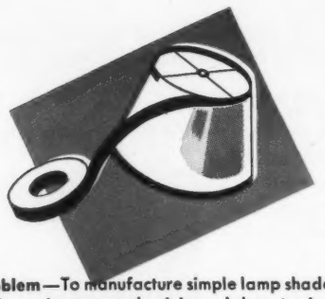
The instrument provides for the detection of ten degrees of

shock in one direction and in one plane. When at any instant the magnitude of shock equals or exceeds the value for which any of the ten sections is calibrated, the light on the indicating instrument associated with that section will glow. Each light is marked with its own value and a direct reading is thereby obtained. The manner in which the shock reaches its maximum value does not influence the reading. Regardless of whether the maximum exists for a long or short period of time, or whether it reaches that point slowly or rapidly, the meter will respond only to the actual magnitude of the maximum itself. This is said to be the distinguishing feature between the G-Meter and the accelerometer.

ELECTRONIC SEAMER FOR THERMOPLASTIC FILMS

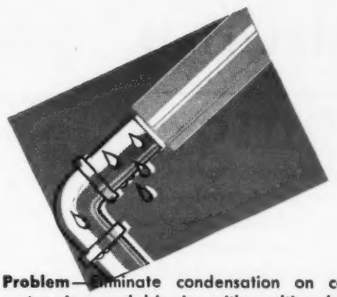
A new line of machines for electronic seaming of thermoplastic film materials, such as Vinylite, Pliofilm, Koroseal, Saran and others, has been developed by Union Special Machine Co., Chicago. A typical unit is one that is equipped with an RCA 200 megacycle (200,000,000 cycles per sec.) constant frequency power generator. Distinctive feature of this machine is its

(*Continued on page 150*)



Problem—To manufacture simple lamp shade with maximum speed, minimum labor; taping paper shade to wire frame.

Solution—Mystik Self-Stik Cloth Tape goes on easily, holds permanently, eliminates moistening operation and drying time.



Problem—Eliminate condensation on cold water pipes and dripping with resulting damage to machinery, storage, materials, etc.

Solution—Mystik Self-Stik DRI-PIPE stops pipe drip positively. A combination of thick insulation and waterproof tape, it applies easily, quickly to pipes without tools.

Problem—To sand blast designs on mirrors and glassware with maximum speed, minimum spoilage.

Solution—Mystik SAND BLAST is ideal masking material made especially for sand blasting glass. Designs are die cut in the Self-Stik mask. Applies and removes easily, cleanly. Positive protection.

Methods *by Mystik*

...Mean Better Packaging

Problem—(1) To mask stainless steel at the mill and during fabrication for protection against scratches, mars, other injuries. (2) Masking material must remove easily without marring polished surface.

Solution—Mystik MASK, a new development, gives positive protection; applies directly from roll to surface (no liner necessary); peels off instantly in one piece. Saves production time. Reduces spoilage, re-polishing.

● The great range of Mystik uses in industry gives you a good idea of the many ways these versatile products are serving the packaging-packing-shipping field. "Self-Stik" Mystik performs many sealing, holding and protecting operations that will get your product to market better-protected.

Mystik comes in many forms—MYSTIK SELF-STIK TAPE, cloth or paper, up to 36" wide—MYSTIK MASK, a reinforced paper material for protecting fine surfaces—MYSTIK SPRA-MASK, a fast method for stencil spray-painting designs and insignia—MYSTIK SAND BLAST, a protective covering for sand blasting glass—MYSTIK DRI-PIPE, an insulation to stop pipe drip—MYSTIK-PRINT, for Self-Stik labels and signs.

FREE— *Send for Mystik samples and interesting new booklet showing how Methods by Mystik can cut costs in your plant. Mail coupon to—Mystik Adhesive Products, 2637 N. Kildare, Chicago 39. Sales offices in major cities. Export office, New York City. Canada—G. A. Moggridge Co., Ltd., St. Catharines, Ont.*

Mystik Adhesive Products, 2637 N. Kildare, Chicago 39.

SEND *FREE* BOOKLET AND FOLLOWING SAMPLES:

☐ Mystik Cloth Tape; ☐ Mystik Waterproof Cloth Tape;
☐ Mystik Mask; ☐ Mystik Spra-Mask; ☐ Mystik Sand Blast;
☐ Mystik Paper Masking Tape; ☐ Mystik Dri-Pipe; ☐ Mystik-Print.

Name_____ Title_____

Company_____

Address_____

_____

MYSTIK
Self-Stik
ADHESIVE PRODUCTS
"ANYTHING THAT STICKS"

Equipment and Materials

(*Continued from page 148*)

ability to produce the fused seam in a silent, continuous operation in contrast with machines which use bar-type electrodes for intermittent step-by-step sealing. This same principle has also been applied to a "feed-off-the arm" seamer for producing tubular sections continuously in any length. Various guides, folders and attachments may be used.

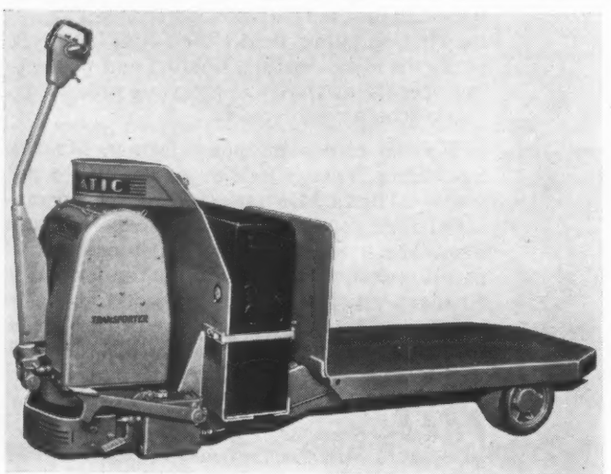
Machine has sufficient power to seal ten thicknesses of 0.004 in. vinyl film or two thicknesses of 0.020 in. film. Seams from $^1/_{16}$ in. to $^1/_4$ in. may be obtained by changing top electrode.

BAKER TO MAKE STOKES MACHINERY

The entire line of Series 14 and 15, Stokes powder fillers, including the 15E, which packages at a rate exceeding 60 containers a minute, has been purchased by the Harold W. Baker Co. of Bryn Mawr, Pa., from the F. J. Stokes Machine Co. of Philadelphia, Pa. Enlarged production facilities at the Baker plant will permit immediate production.

POSTWAR MATERIALS HANDLING EQUIPMENT

Automatic Transportation Co., Chicago, Ill., has just announced its new improved electrically propelled hand truck. The new Transporter features more than a score of major improvements, the company states, which will give the unit a potential service



life double that of its predecessor and cut the cost of maintenance in half. The only change in appearance from the prewar model is the higher driving unit which made possible the relocation of component parts resulting in greater accessibility for maintenance. Four models are available.

PRODUCTION SAMPLES OF PLASTIC SHEETS

Rogers Corp., Manchester, Conn., has developed an experimental machine which duplicates the output of full-scale equipment and makes possible their offer to manufacturers of free production samples of sheets of new fibrous and plastic materials from as little as 25 lbs. of component ingredients. The experimental machine retains full diameter and other vertical measurements of standard equipment and handles any material adapted to the wet machine process. The preferable thickness range is 0.031 in., though thicknesses from 0.007 in. to 0.150 in. may be produced. This has been successfully accomplished with cellulose, leather, asphalt, glass fibres, asbestos, phenolics, ureas, cork, ground wood, flax and others that were considered waste materials, the company states. By a special beater process which includes the wet laminating of many thin plies until they are built up into sheets of any desired thickness, the plies are laminated under high pressure without the use of adhesives or chemicals, then dried free from any tension. Fibres stay interlocked after fabrication, providing extra strength to the finished parts.

STRIP-TYPE PLASTIC COATING

"Plastipak," a coating said to be protective against moisture, acids and alkalis, that can be applied at room temperature by either dipping or spraying, has been announced by Puritan Co., Inc., Rochester, N. Y. The coating, a vinyl resin compound, dries quickly in air and forms a clear, tough, elastic, transparent or colored film which adheres tenaciously to the product to which it is applied, but can be quickly and easily stripped off in one continuous sheet when desired, it is said. Its makers further claim that it has been applied successfully to metal parts such as cutting tools, gears, drills, axes and cutlery, as well as to sheet metal, wood products, glass and porcelain. No special tanks or equipment are required.

IMPROVED DISPENSER FOR FLEXIBLE CORRUGATED

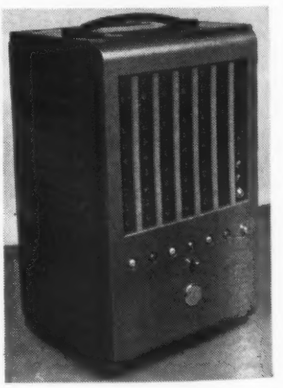
A new and faster dispenser for flexible corrugated has been announced by Sherman Paper Products Corp., Newton Upper Falls, Mass. Known as the Corro-Cutter Senior Model, the new machine features a device which, it is claimed, will greatly increase output and simplify the use of flexible corrugated. This device, called a "flipper," ejects the corrugated from under the tearing edge of the cutter so that it may be easily grasped by the operator thus eliminating fumbling under the cutter bar.

WAA SALES OF CONTAINERS

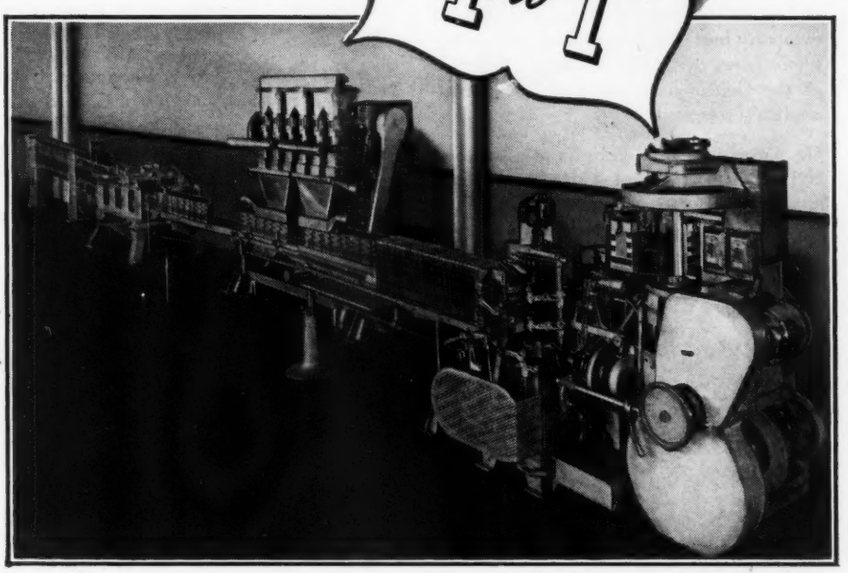
Large quantities of many types of containers are available to all trade levels as well as industrial and commercial users of packaging materials through current fixed-price sales of surplus consumer goods, the New York Regional Office of the War Assets Administration has announced. The containers include boxes, crates, cases, fibre and chipboard cartons, chests and tubes, both wood and metal, usable for many purposes. Samples are at WAA display room, Fifth Floor, 70 Pine Street, New York.

ELECTRONIC COUNTING AND MEASURING DEVICE

The Radio Corp. of America, Camden, N. J., has developed an electronic device designed for micro-second timing and for high-speed counting. Two types are available — one measures time intervals up to 1 second in steps of 5 micro-seconds and counts at speeds as high as 200,000 per second; while the other measures time intervals up to 0.1 second in steps of 1 micro-second, and counts at speeds as high as 1,000,000 per second. When used in conjunction with photo-electric equipment, high-speed counting measurements can be made on such diverse applications as the number of items rapidly passing on a continuous conveyor belt, or the number of drops of liquid falling from viscosity testing apparatus. The instrument is particularly suitable for counting where speeds are too fast for conventional counters; also as an integral unit of selective-counting machines which automatically start, stop or shift operations when a predetermined number of items has been counted.



In soap packaging IT'S PNEUMATIC 4 to 1



Ivory Snow
Linal
White King
Vel
Rinso
Nola
Oakite
Oxydol
Duz
Climalene
Soapine
Lux

FAST, low-cost packaging is a matter of major importance to the manufacturers of America's famous soaps. With their enormous output they *must* have day in, day out weighing accuracy within a fraction of an ounce. And a rugged, yet smooth-running system of forming, filling, and sealing their containers.

They've got just that in the Pneumatic equipment you'll find in four out of every five soap plants. It is not chance that so many of them use Pneumatic. No! The reason is that over the years Pneumatic machines have proved themselves unexcelled for packaging, not only soap, but numerous other dry, free-flowing materials, too, at a "lower cost per container."

Call in a Pneumatic representative as the first step to future packaging efficiency. PNEUMATIC SCALE CORPORATION, LTD., 82 Newport Ave., North Quincy 71, Mass. New York, N. Y., San Francisco, Cal., Chicago, Ill., Los Angeles, Cal.

PNEUMATIC PACKAGING BOTTLING **MACHINERY**

Over eighty different machines for the packaging of dry, free-flowing products and the cleaning, filling, capping, and labeling of containers for liquids and semi-liquids.

Plants and People

An indictment has been returned by a Federal Grand Jury in San Francisco charging the **American Can Co.** and the **Continental Can Co., Inc.,** with "conspiring to violate the Sherman anti-trust act by fixing the terms, conditions and prices upon which tin cans are sold to packers and other uses." **D. W. Figgis,** president of American Can, promptly stated that he was unaware of the basis of the charges, brought by the Department of Justice anti-trust division, and that his company had practiced a policy of "meticulous observance of the law." Officials of the Continental Can Co. had no immedicate comment.

Dr. Frank H. Reichel, president of **Sylvania Industrial Corp.,** has been elected chairman of the board and chief executive officer of **American Viscose Corp.,** manufacturers of continuous filament rayon. Recently the two companies entered into a formal merger agreement, formalities of which are expected to be completed in 90 days. Dr. Reichel has been a member of the board of American Viscose for the past two years and president of Sylvania since 1938.

Dr. F. H. Reichel

E. A. Throckmorton, president of **Container Testing Laboratories,** Chicago, has been elected vice-president of the **American Management Assn.** in charge of the packaging division. **John M. Hancock** is the new chairman of the board of the association, **Alvin E. Dodd** continues as president, and **Keith S. McHugh** is now chairman of AMA's executive committee.

John M. MacLaurin has been made manager of the Mid-Western division of **The McLaurin-Jones Co.,** Brookfield, Mass., manufacturers of gummed and coated papers. His headquarters will be in Chicago.

H. D. Catty Corp., New York, bag makers and converters, have re-established their branch office at 33 Franklin St., Buffalo, N. Y.

Richford Corp., New York, has been appointed sole distributor of plastic containers made by **Blue River Plastics Mfg. Corp.,** New York.

Continental Can Co.'s paper division will soon begin construction of a new paper container plant in Utica, N. Y.

Gerald G. Wood, head of the box and printing Dept. of **Agfa Ansco,** Binghamton, N. Y., has been made assistant personnel manager of the division. **Gerald A. Rohr** has succeeded Mr. Wood.

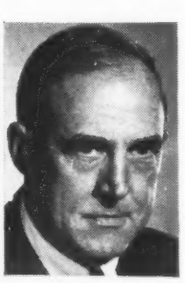
Frank W. Hyman has sold his entire interest in the **Rotogravure Engineering Co.** to the **Miller Printing Machine Co.,** Pittsburgh, Pa., and has resigned as its president, treasurer and director. Mr. Hyman has established offices at 299 Marginal St., East Boston, Mass., and will act as rotogravure consultant to those interested in coating, printing and laminating.

The Heekin Can Co., Cincinnati, Ohio, has announced the election of **C. A. Rolfes** as vice-president in charge of sales and **A. F. Rassenfoss** as secretary and treasurer. Mr. Rolfes and Mr. Rassenfoss have also been named members of the company's board of directors. Other advancements in the organization's personnel include **J. C. Cahill** as sales manager of the general line and lithographed can sales; **Charles L. Heekin,** manager of packers can sales, and **Edward J. Nolan,** assistant to the vice-president in charge of sales.

The Alvey Conveyor Mfg. Co., St. Louis, Mo., has added the following sales representatives to its staff: **Kuhn & Co.,** Los Angeles, for the Southern California area; **Markwart Industrial Equipment Co.,** Sacramento and Berkeley, for the Northern California area; **R. M. Duncan,** Portland, for the territory of Oregon. **F. T. Crowe Corp.,** Seattle, continues to represent Alvey in Washington.

The Allegheny Valley Glass Co., a new corporation, has purchased the **H. J. Heinz Co.** glass container plant at Sharpsburg, Pa. The new firm will retain the present management and personnel. **Brockway Glass Co.,** Brockway, Pa., has undertaken to purchase the entire output of the Allegheny company.

L. W. Graaskamp has been named general sales manager of **American Can Co.,** New York. Mr. Graaskamp joined the company at Chicago in 1920 and was transferred to New York in 1944 as assistant general sales manager.



L. W. Graaskamp

Reconversion of **American Can's Amertorp** plant in St. Louis from torpedo production to can manufacturing is under way, and can production is expected to start by Sept. 1. Eight metal container and five fibre container manufacturing lines costing over $4,500,000 will be installed.

Rotogravure Engineering Co., a subsidiary of the **Miller Printing Machinery Co.** of Pittsburgh, Pa., makers of automatic printing machinery, has appointed **Elmer G. Stacy** as its sales manager according to **E. Terry Gaylord.**

E. G. Stacy

Aluminum Co. of America, Pittsburgh, Pa., has announced plans for the construction of a $30,000,000 new plant near Davenport, Iowa, for the rolling of aluminum sheet and plate.

Thomas C. Kelly, packaging consultant, is now occupying new offices in the **Field Bldg.,** 135 S. LaSalle St., Chicago, Ill.

R. Eric Friden has joined the staff of **Barnes & Reinecke,** Chicago, industrial designers and engineers, as the firm's design representative.

Beek Myer has been appointed Cleveland manager for **Display Corp.,** Milwaukee, Wisc., makers of point-of-sale displays.

Louis Schulman, president of **Louis Schulman Co., Inc.,** New York, has been elected a director of **Louis Dejonge & Co.,** New York, manufacturers of box papers. Other new directors on the Dejonge board are **Samuel W. Ziegler** and **John Blakle,** also of the Schulman Co.

Jay R. Haymond has been appointed as superintendent of perishable traffic for the air cargo division of **United Air Lines,** succeeding **J. Prescott Blount.**

Cupples-Hesse Corp., St. Louis, Mo., manufacturers of paper products, plan the erection of a new building for the manufacture of paper food cups and glassine and cellophane bags.

Robert F. Schnier, recently released from military service, has rejoined the sales staff of **I. F. Schnier Co.,** San Francisco, C. I., distributors of packaging materials.

Shellmar Products Corp., Mt. Vernon, Ohio, has appointed **H. I. Phillips** as assistant sales manager, Eastern division, with headquarters in New York.

Container Corp. of America, Chicago, will establish a plant at Sioux City, Iowa, to produce corrugated shipping containers.

Stanley Asp, recently released from active service, has returned to the research

(Continued on page 154)

How to Appeal to Women

New Ray Creme Hair Treatment dispensing set is a product of Raymond Laboratories, Inc., of St. Paul, Minn.

Put your product in a BEETLE* plastic package. It creates sales. It satisfies customers.

For example, this colorful, convenient BEETLE plastic tray with containers and dispensers helps sell professional New Ray Creme hair treatments. It's a successful product package—pleasant to handle and easy to keep clean; compact, lightweight, smooth and bright.

BEETLE packages help sell many other leading cosmetic and drug lines, as well as other products. Articles can be produced in any standard color, or combination of colors, at low cost, on standard molding equipment.

We shall be glad to give you complete details on BEETLE plastic, and on how you, too, can profit by adapting BEETLE to your packages.

AMERICAN CYANAMID COMPANY
Plastics Division
34B Rockefeller Plaza • New York 20, N. Y.

Cyanamid Plastics

BEETLE* . MELMAC* . MELURAC* . LAMINAC* . URAC*
**Reg. U. S. Pat. Off.*

Plants and People

(*Continued from page 152*)

division of **Filtrol Corp.,** Los Angeles, Cal., desiccant manufacturers.

Cushman & Denison Mfg. Co., New York, distributors of marking devices and printing inks, has named **Harry L. Short,** 173 W. Madison St., Chicago, as its representative in the north central states.

Harry J. Williams has been appointed Eastern sales manager, foil division, **Reynolds Metals Co.** His headquarters will be at 19 E. 47 St., New York City.

The Fred Todt Co., Los Angeles, Cal., has been made Pacific Coast representative for packaging and bottling equipment manufactured by **Pneumatic Scale Corp. Ltd.,** at North Quincy, Mass. **Charles A. Twombly,** who has handled package equipment and served as Pneumatic factory representative in San Francisco for many years, will now serve the company in that area as technical advisor in packaging.

Fred Todt

William S. Forbes has been released from the presidency of **Forbes Lithograph Mfg. Co.,** Boston, Mass., to become chairman of the board of directors. He will continue as treasurer of the company. **Arthur R. Hitchings,** former secretary, is the new president. Other officials are **Ralph W. Thomas,** vice-president and sales manager; **Carl C. Laier,** vice-president, plant manager and assistant treasurer; **John B. Osborn, Charles F. Haist, W. Stuart Forbes, Jr., Sanford S. Holden, Paul F. Paige, Harry M. Hillery,** and **Joseph D. Sayles,** vice-presidents.

E. P. Lawson Co., Inc., New York manufacturers of paper cutting machinery and bindery equipment, has set up a research department under the supervision of **Fred Seybold,** chief engineer of the company. Assisting Mr. Seybold and in direct charge of the new department is **Frank Cade,** service manager.

Harvey A. Fedler has been named advertising manager of **The F. G. Findley Co.,** Milwaukee, Wisc., manufacturers of industrial adhesives.

The Midwest Foil Co., Inc., recently organized to process and fabricate aluminum foil products, has started operations at 519 Zane St., Louisville 3, Ky. **T. D. Gebhart,** president; **L. B. Perry,** vice-president, and **B. B. Wright,** secretary-treasurer, were for many years associated with **Reynolds Metals Co.**

The Shipping Container Institute, recently formed by a number of leading fibre box manufacturers to provide technical information and conduct fundamental research, has appointed **Theodore J. Gross** as managing director. Mr. Gross was formerly president of **Container Testing Laboratories,** New York.

The Perkins-Goodwin Co., pulp and paper, New York, observed their **100th anniversary** with a dinner at the Waldorf Astoria on July 1.

Stecher-Traung Lithograph Corp., Rochester, N. Y., has announced the return of 12 members of its sales staff from the armed services. Each has completed a refresher course to bring them up to date on latest developments in lithography.

Dr. Sidney M. Cadwell has been appointed director of research and technical development for the **U. S. Rubber Co.,** New York.

C. P. Joslyn, manager of **The Goodyear Tire & Rubber Co.'s** chemical products division, was presented with a pin to mark his 20 years of service with the company.

George P. Lehmann has been appointed to the newly created post of assistant manager of **General Electric Co.'s** plastics division.

One of the first shipments of packaging machinery by air recently was made by **Package Machinery Co.** Three wrapping machines, each weighing 1,800 lbs., were flown from the company's plant, Springfield, Mass., to Ontario, Ore. Speed in shipment was essential in order that the machines would be available for wrapping frozen vegetable packs. **Package Machinery,** through the Fred Todt Co., its Pacific Coast representative, now has a San Francisco office at 320 Market St.

Expansion of its Cleveland offices has been announced by **B. F. Goodrich Chemical Co.** Additional space has been obtained in the Sloan Bldg., adjacent to the company's present headquarters in the Rose Bldg.

Harold L. Aldrich has been appointed district representative in the New York office of **General Electric Co.'s** chemical department.

Otis Angier, former president of **Angier Sales Corp.,** announces the formation of **Otis Angier & Associates,** Framingham, Mass., consultants in packaging and protection of materiel for industry.

A. L. Rowe, president of **Rowe Packaging Co., Ltd.,** Toronto, spoke before the **Canadian Exporters Assn.** in Hamilton Ont., recently, calling attention to the increased consciousness of the importance of export packaging brought about by faulty packaging during the war.

A. H. Wirz, Inc., Chester, Pa., manufacturers of collapsible tubes welcomed back to service in the company 42 veterans with a banquet in their honor.

Crown Cork & Seal Co., Inc., Baltimore, Md., has been awarded the Brand Names Research Foundation Golden **"Certificate of Public Service"** in recognition of 52 years continuous service of the "Crown Cork" brand name. **Walter McManus,** secretary of the company, received the presentation from A. O. Buckingham, chairman of the foundation, at a testimonial dinner. Construction has started on Crown's new machinery plant in Baltimore to provide the company with more adequate facilities.

A. O. Buckingham and W. McManus

Felix Sang, recently discharged from the Army, has joined **Copeland Displays, Inc.,** New York. Mr. Sang was formerly associated with **Egmont Arens,** industrial designer.

Victor Wagner has severed his connection with the **Wagner Folding Box Corp.,** Buffalo, N. Y.

Paper Package Co., Indianapolis, Ind., makers of set-up boxes and cartons, is celebrating the 50th year of its continuous existence in the packaging industry.

Charles E. McManus, chairman of the board of **Crown Cork & Seal Co., Inc.,** died June 3, in New York, after a short illness.

Joseph E. Dulaney and **Virginius W. Moody, Jr.,** respectively assistant vice-president and assistant manufacturing director of the **Reynolds Metals Co.,** foil division, were killed Saturday June 29 when they were struck by lightening while playing golf at a company outing.

DAVISON silica gel

prevents caking

Caking and lumping in most crystalline and finely powdered materials may be inhibited by the addition of Davison silica gel—less than 1% often proving effective.

Where it is undesirable to mix silica gel with the product—the same result may be obtained by the addition of a bag of Protek-Sorb* silica gel to the sealed moisture-proof container.

The Answer to a vexing Packaging Problem

Where caking and lumping are caused by moisture forming a film of saturated solution around individual particles, causing them to adhere, Davison silica gel in most instances will take up this moisture in contact with the material (in a sealed moisture-proof container) and present a dry, free-flowing product to the consumer.

Davison silica gel is chemically inert to the ordinary acids and their salts—and is non-toxic. It cannot, however, be used with strong alkalies and should not be used mixed with the product where a slight turbidity (harmless) is undesirable in the resulting solution.

*Reg. U. S. Pat. Off.

Caking and lumping make up a vexing problem in many fields—from bulk chemicals in drums to packaged foods, pharmaceuticals and cosmetic powders.

Caking and lumping not only make some products unattractive to the eye but are time wasters in that material must be dug out of containers . . . it is also difficult to weigh or measure caked material. A free-flowing powder is often required in order to accomplish packaging with automatic machinery. Consult the Davison technical staff, which is at your service, for problems in this field.

THE DAVISON CHEMICAL CORPORATION

Progress through Chemistry

BALTIMORE 3, MD.

Canadian Exclusive Sales Agents for PROTEK-SORB silica gel • CANADIAN INDUSTRIES LIMITED • General Chemicals Division

For Your Information

The Catalog of American Standards, recently published by the **American Standards Assn.,** catalogs 27 years of achievement in standardization for industry. The booklet includes definitions of technical terms, materials specifications, dimensions, safety provisions for the use of machinery, methods of work and methods of test for finished products. The standards represent agreement on the part of maker, seller and user groups, and they are constantly revised to keep up with developments and inventions. Copies are available, free of charge, on request to the association, 70 E. 45 St., New York 17, N. Y.

A public relations program has been undertaken by the **Can Mfgrs. Institute** to welcome the return of steel-and-tin containers to neighborhood store shelves and to stimulate the sale of products in cans. A comparative report of steel consumed in metal cans, recently released by the Institute, reveals a steadily rising tonnage of steel consumed by the canning industry during the late war years.

The Society of the Plastics Industry, Inc., has announced the availability of advance copies of the fifth chapter of its Technical Handbook, entitled **"Cementing and Assembly of Plastics."** Written by a four-man committee, this section of the handbook is devoted to basic processes of joining and bonding plastics pieces. Only a limited printing of advance copies has been made and there is a nominal charge for them. Requests should be addressed to the society's engineering and technical committee, 295 Madison Ave., New York 17, N. Y.

A service which will enable manufacturers to gear their designing and engineering of containers for new products to the development of the products themselves is being offered by the **Wirebound Box Mfgrs. Assn.,** 43 E. Ohio St., Chicago 11, Ill.

A new **"Blue Book of Packaging,"** a catalog on round steel strapping tools and auxiliary equipment manufactured by the **Gerrard Steel Strapping Co.,** has just been published. Copies are available from the company, 4731 S. Richmond St., Chicago 32, Ill.

Technical data booklets on two new coating materials—**Saran F-120,** a solvent soluble resin imparting low water-vapor transmission, and **Saran F-122,** a latex forming a continuous film upon air drying—are available from **The Dow Chemical Co.** Request copies from the company's plastics division, Midland, Mich.

New features of the latest models of **Ceco Adjustable Carton Sealers** are described in a bulletin recently published by the **Container Equipment Corp.** Copies are obtainable from the company, Newark 4, N. J.

The new **Anchor Steriseal Machine** for high-speed vacuum sealing of glass-packed food products is described and illustrated in a folder just released by the **Anchor Hocking Glass Corp.** Copies may be obtained on request to the company.

Information on sealers manufactured by **Doughboy Machines, Inc.,** New Richmond, Wisc., is presented in the firm's publication, **"Doughboy Makes News."** Copies are available on request to the company.

A seven-question quiz sheet, designed to save time and to prevent the use of the wrong plastic, is being issued by the **Creative Plastic Corp.** Use of the **"Plastics Specification Quiz"** enables a manufacturer who does not employ a plastics engineer to provide sufficient details about his product to enable the supplier to decide whether there is a suitable plastic material for his needs. Copies of the quiz may be obtained by writing the company at 963 Kent Ave., Brooklyn 5, N. Y.

What's doing

July 24–Aug. 2—**Assn. of New York State Canners, Inc.,** New York State Experiment Station, Canning Technicians School, Geneva, N. Y.

July 28–31—**N. Y. State Food Merchants Assn.,** Grand Union Hotel, Saratoga Springs, N. Y.

Aug. 21–24—**National Food Distributors Assn.,** Sherman, Chicago.

A special meeting of the waxed paper industry was held on June 27–28 at **French Lick, Ind.,** to discuss recent OPA price adjustments and regulations. **R. C. McCaskey,** of the **Minerva Wax Paper Co.** and chairman of the **OPA Waxed Paper Industry Advisory Committee,** discussed current OPA decisions and the possibility of further increased raw paper stock.

Factors in the postwar outlook for flexible packaging were reviewed by members of the **Flexible Packaging Institute** at a meeting held at the Drake Hotel, Chicago, on June 13. In the open meeting following a closed business session, **Dr. Charles Roos, Econometric Institute, Inc.,** discussed the industry's prospects in the light of general economic conditions. **Maynard Cusack, Riegel Paper Corp.,** told Institute members that manufacturers of glassine were expanding their productive capacity.

The four basic methods of interior packaging are defined according to Government and industry packaging authorities in the **"Float Packaging"** booklet recently published by **Kimberly-Clark Corp.,** Neenah, Wisc. How some of the country's industries do a good low-cost job of protecting their products in shipment is described and illustrated. Copies of the brochure may be obtained on request to the company.

A Library of Promotion Classics has recently been established by **Davis, Delaney, Inc.,** New York printing firm, making available for leisurely examination by executives copies of important promotion pieces whose high cost prohibits their general distribution. Library cards are issued to members, and books may be kept for one month. In addition to the major promotion classics, members will periodically be offered for their personal business libraries a series of junior classics less sumptuous but no less important pieces. The service is available to all executives, without cost. To secure membership cards, address Librarian, Library of Promotion Classics, 141 E. 25 St., New York 10, N. Y.

Reproductions of 94 decal signs used for point-of-sale promotion are presented in the **"Ad-Visor"** brochure published by **The Meyercord Co.,** 5323 W. Lake St., Chicago, Ill. Designed as a guide for industry, it contains many suggestions for dealer identification and product promotion. Copies are available on request to the company.

New officers elected at the annual meeting of the **Point of Purchase Advertising Institute, Inc.,** New York, include **Cliff Vanderbogart,** of **Niagara Lithograph Co.,** president; **Ralph Thomas,** of **Forbes Lithograph Co.,** first vice-president; **Edgar Reutner,** of **William A. Howe Co.,** second vice-president and **Carl Percy,** of **Carl Percy, Inc.,** treasurer. New directors of the institute are **Mr. Vaderbogart, Mr. Percy** and **Royal A. Hoffman,** of **Arvey Corp.**

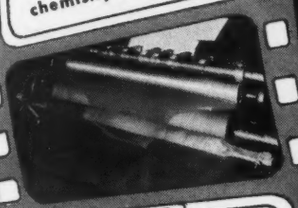
The Gaylord Container Corp., St. Louis, Mo., in adopting the **Howard Clark Quanta Color System of Color Harmony,** has prepared a leaflet explaining the philosophy of that system. Copies may be had from Gaylord's, 111 N. 4th St., St. Louis.

Paisley SCIENTIFIC ADHESIVE SERVICE

IF IT'S AN ADHESIVE PROBLEM . . .

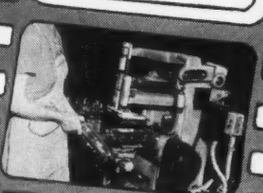
"PUT IT UP TO Paisley"

EPB One of the largest manufacturers in its industry with a historical background of adhesive and starch chemistry since 1851.

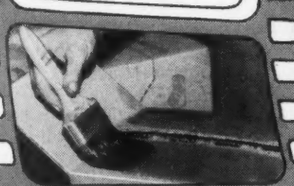


EPB Foamless, clean-running, quick-tack Paisley Tightwrap Glue at work in a set-up box plant.

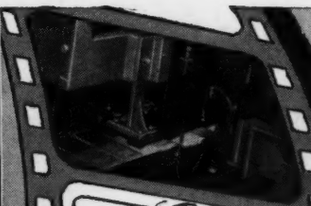
EPB Fast automatic package wrapping is made possible with Paisley Bundling Adhesive.



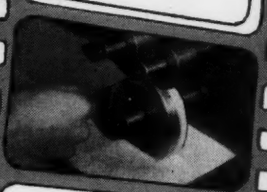
EPB Use Paisley Bottle Labeling Adhesives for all makes of semi or fully automatic labeling machines.



EPB Quick-setting Paisley Case Sealing Glue featured in hand brushing operation.



EPB Automatic top and bottom carton sealer applying Paisley ready-for-use Carton Sealing Glue.



EPB Adhesive machine applications are efficient, economical with Paisley Adhesives (showing edge gumming machine.)

EPB Paisley Lap Belt Pastes operate more efficiently in all can labeling machines.

Send for THIS ADHESIVE OPERATION DATA SHEET

EPB Here's your guide to getting the ONE best, most efficient adhesive for the operation you describe.

OVER 400 different raw materials and chemicals are used in compounding Adhesive Products, the combinations running into hundreds of thousands of different formulas and variations. The PAISLEY Laboratories are continually perfecting new products or improving existing ones to meet the ever changing requirements of industry.

Many concerns, large and small, national and local, in all fields of endeavor, have found that it pays to know what's going on in Adhesive research—what's new and productive, and most efficient for every labeling, sealing and fabricating operation. They have found extra profits, through production speed-up; lower costs by utilizing *PAISLEY Scientific Adhesive Service* to obtain the one correct glue, paste or cement to meet the individual operation under study. Large and small users of Adhesives can enjoy the benefits of *PAISLEY Scientific Adhesive Service* as shipments range from gallon containers to large 55 gallon drums and carlot quantities. When you have an operation requiring Adhesives "Put it up to PAISLEY"!

PAISLEY PRODUCTS INCORPORATED

Manufacturers of Glues, Pastes, Resin Adhesives, Cements, and Related Chemical Products

1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

U. S. patent digest

edited by H. A. Levey

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at ten cents each in currency, money order or certified check; postage stamps are not accepted.

Process for Producing Glues and Adhesives from Keratin Protein Materials, G. H. Brother & C. H. Binkley (to Claude R. Wickar as Secretary of Agriculture of the U. S., and his successors in office). U. S. 2,399,161, Apr. 30. A process for the production of a powdered adhesive comprising reducing a native keratin in an aqueous alkaline sulfide solution of about 0.5% to 1.5% concentration, dispersing the reduced product in a caustic soda solution of about 1.0% concentration, drying the resulting liquid at a temperature not above about 104 deg. F., and reducing the dried product to a powder.

Tank Filler, S. A. Chouinard, Indian Orchard, Mass. U. S. 2,399,167, Apr. 30. A fill pipe construction comprising in combination a length of pipe having a lower end to insert into opening of a drum.

Container, A. Merkle (to American Sealcone Corp., New York, N. Y.). U. S. 2,399,241, Apr. 30. A container, comprising a body having the marginal portions at the opposite ends folded inwardly and free of the inner side of the body, and closures for the ends of the body having the marginal portion flanged laterally and folded outwardly and reversely upon itself substantially to U-shape in cross section, and said closures inserted into the ends.

Can End Assembling Machine, J. F. Peters (to American Can Co., New York, N. Y.). U. S. 2,399,250, Apr. 30. In an apparatus for assembling and joining a tubular oppositely beaded body and flat end members of fibre containers, the combination of a can body conveyor for advancing the can bodies in a predetermined path of travel, said conveyor having pockets for receiving can bodies with the longitudinal axes of the bodies extending transversely of the line of travel.

Filling Apparatus and Valve, R. J. Stewart & H. H. Franz (to Crown Cork & Seal Co., Baltimore, Md.). U. S. 2,399,300, Apr. 30. Filling apparatus comprising a filler tank, a container filling device connected to said tank, a source of liquid supply, a conduit connecting the source and tank and terminating below the normal liquid level in the latter, vacuum producing means opening to said tank above said liquid conduit.

Mastic Compositions, V. E. Watts & P. E. McCoy (to American Bitumals Co., San Francisco, Calif.). U. S. 2,399,411, Apr. 30. A mastic-type composition, formed of substantial amounts each of aluminous cement, alpha gypsum and an aqueous oil-in-water type emulsion of an organic substance selected from the group consisting of bitumens, waxes and resins.

Coating Composition for Paper and the Like, C. G. Landes (to American Cyanamid Co., New York, N. Y.). U. S. 2,399,489, Apr. 30. A coating composition having a pH within the range 4.0 to 7.0 and having a total solids content of from about 20% to 65% by weight comprising a mineral pigment, an alkali metal polyphosphate dispersing agent, starch in amounts from about 15% to 40% by weight of the dry weight of pigments, acid-curing urea-aldehyde and melamine-aldehyde condensation products in amounts from 5% to 50% by weight of the weight of the starch, and an acidic curing catalyst for said condensation product.

Carboy Crate, K. G. Miller, Lansing, Mich. U. S. 2,399,499, Apr. 30. In a carboy crate having two parallel sides, means supporting a carboy within said crate against movement with respect thereto, and an opening in the top permitting the neck of said carboy to extend above said top a distance sufficient for easy pouring from said carboy.

Paper Cutter, C. W. Willits, Saginaw, Mich. U. S. 2,399,529, Apr. 30. An apparatus for shredding non-metallic material of relatively greater length than thickness consisting of a rotating drum mounted fixedly with respect to the base, and equipped with a plurality of straight-edge blade members mounted on said drum.

Length Terms of Weight Measuring Device, L. M. Williams, Chesapeake, Ohio. U. S. 2,399,528, Apr. 30. A device combining a base, a beam pivoted thereon, a weighing pan associated with said beam and having guiding means therefor, and equipped with an adjustable, calibrated tare weight counter-balancing means adjacent to the pivotal support for said beam.

Carton, P. Beldon (to National Union Radio Corp., Newark, N. J.). U. S. 2,399,537, Apr. 30. A carton for radio tubes and the like formed from a one piece blank consisting of a major longitudinal wrapper portion and a major filler portion, the wrapper portion being provided with transverse score lines, one of the end side walls forming an outer side wall of the filler portion and having contiguous wing sections laterally extending therefrom.

Joint for Collapsible Containers, P. Salkind, New York, N. Y. U. S. 2,399,590, Apr. 30. As an article of manufacture, a collapsible container having a pair of adjacent walls, a hinge connection between said walls, said walls being rotatable about said hinge section to a predetermined angular relation.

Cellulose Ether Composition, L. A. Rauner & M. J. Hunter (to The Dow Chemical Co., Midland, Mich.). U. S. 2,399,602, Apr. 30. A composition characterized by high dielectric strength, low moisture absorption, and high flexibility at low temperatures, comprising essentially ethyl cellulose having an ethoxy content of from 50% to 53% which is soluble in aliphatic hydrocarbon solvents and esters of phosphoric and phthalic acids and an excess of 5% by weight of a plasticizer.

Receptacle, P. J. Schoenberger, West St. Paul, Minn. U. S. 2,399,604, Apr. 30. A receptacle comprising a bottom and side end walls integrally connected to the bottom, and diagonally foldable corner portions integrally connected to the side and end walls and folded onto the side walls, said corner portions having angularly related tabs facing toward each other on opposite sides of their diagonal folding line.

Knotless Package Tie, I. R. Trevisan, Newark, N. J. U. S. Re: 22,753, May 7. A knotless tying device comprising a gripping post, hooks radially disposed adjacent an end of said post and adapted to gather portions of a binding to be tied, including the loose ends of said binding.

Apparatus for Production and Application of Reinforcing Elements, W. T. Bailey (to Stokes & Smith Co., Philadelphia, Pa.). U. S. 2,399,616, May 7. Mechanism for applying tabs to flexible sheets comprising rolls for feeding a strip of tabbing material, knife structure for cutting tabs from said strip, a common operating member for said rolls and said knife structure.

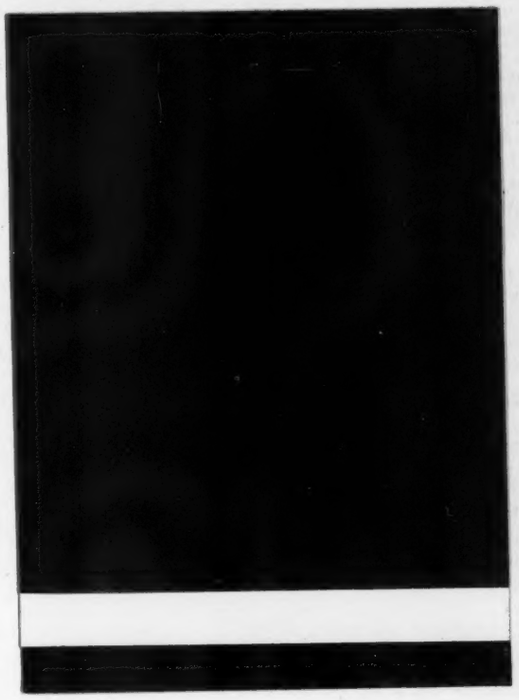
Carton, F. A. Marx (to The Richardson Taylor-Globe Corp., Cincinnati, Ohio). U. S. 2,399,649, May 7. A carton of flexible material formed to provide bottom, inner and outer side walls attached to the bottom, said inner side walls of shorter length than the outer side walls, a lock flap at each end of the inner side walls and inter-engaging across said bottom with the lock flap opposite thereto.

Sizing Composition for Use in Papermaking, A. J. Luettgen (to P. H. Glatfelter Co., Spring Grove, Pa., a corporation of Pennsylvania). U. S. 2,399,748, May 7. A sizing composition for use in paper making, in the form of an aqueous suspension and comprising a binding agent selected from the class consisting of the fusible resins and waxes.

Bottle Lugger, R. Scholz, Dover, N. J. U. S. 2,399,893, May 7. A device comprising a rigid base member for supporting an article to be carried, a rigid top member having a portion to engage the top portion of said article, a flexible loop at each of two opposite edges of said base member having its ends connected to said base member at spaced points adjacent said edge and its right serving as a hand-hold for carrying said base member.

Container Fabricating Machine, C. Z. Monroe (to The American Paper Bottle Co., Toledo, Ohio). U. S. 2,399,934, May 7. In a container fabricating machine, in combination, a magazine for retaining a plurality of collapsed tubular container blanks in pack formation, and means for withdrawing container blanks singly from the end of the pack and opening the same, said means including a suction device for engaging the end blank of the pack.

PYR-O-SHEEN



• *A Holyoke Original*

Dress up your product—with the brilliant finish of PYR-O-SHEEN, in all colors. It's washable, soil-proof and rub-proof, and will protect as well as enhance the beauty of your package and your product.

Samples on request.

Holyoke ORIGINAL PAPERS

HOLYOKE COATED & PRINTED PAPER CO.

Incorporated

454 Broome Street **New York 13, N. Y.**

Liquid Dispensing Device, G. W. Fouke, St. Louis, Mo. U. S. 2,400,084, May 14. A dispensing receptacle having a filling opening with a shouldered collar and a dispensing opening spaced therefrom, a valve for said latter opening spaced therefrom, a stem element projecting inwardly from said valve toward said filling opening, a U-shaped member resiliently lodged in said collar against the shouldered part thereof.

Article Assembling, C. D. Knowlton & F. R. Thresh (to Hoague-Sprague Corp., Lynn, Mass.). U. S. 2,400,153, May 14. The combination with means for closing boxes with their covers, of means for advancing boxes and covers separately in pairs to the closing means, means for testing each article of the advancing pair to determine the absence of either a box or a cover, and means whereby the unmatched box or cover is discharged.

Packaging Device, J. W. Grodin, Shaker Heights, Ohio. U. S. 2,400,197, May 14. A packaging device for a plurality of notched ingots of the type forming parallel lateral channels when aligned side by side and back to back, comprising an inverted plug member engaging a channel formed by the aligned notches in a layer of inverted ingots, and a plug member engaging a channel formed by the aligned notches in a layer of upright ingots.

Cigarette Paper Booklet, O. F. Goepfert, W. K. Straus & R. H. Clayton, Jr. (to Champagne Paper Corp., a corporation of North Carolina). U. S. 2,400,301, May 14. In a booklet for cigarette papers and the like, a cover having opposing, integral cover portions hingedly connected along one edge and arranged to receive therebetween a pack of cigarette papers, and a fastening means for said cover comprising a flexible string of non-elastic material to one of said cover portions adjacent to a free edge thereof.

Method of Manufacturing Metal Coated Articles, W. W. Hamel, New York, N. Y. U. S. 2,400,304, May 14. Process for coating paper articles with aluminum, which comprises wetting the surface of the articles with glycerin and then spraying fused aluminum upon the wetted surface.

Strand Packaging Apparatus, A. E. Winslow (to Farrel-Birmingham Co., Inc., Ansonia, Conn.). U. S. 2,400,324, May 14. In a strand packaging apparatus, a plurality of driven belts superimposed one above the other and of a width substantially the axial length of the packages to be wound, a plurality of rows of rotatably mounted yarn packages positioned one above the other in step.

Film Containing Iodine, C. J. Cavallito (to Wingfoot-Corp., Akron, Ohio). U. S. 2,400,389, May 14. A laminated sheet of rubber hydrochloride film, one ply of which is rubber hydrochloride and contains no iodine and the other of which is rubber hydrochloride which contains an iodine carrier and contains iodine in a condition in which it is readily liberated.

Package, A. B. Clunan (to Wingfoot Corp., Akron, Ohio). U. S. 2,400,390, May 14. An airtight, vacuum package which contains, in addition to the material packaged therein, evacuated space which tends continually to draw air through the walls of the package, the walls of the package being flexible and composed of a laminated sheet which is a metal foil on the exterior and rubber hydrochloride film on the interior, the seams of the package being formed by coalescence of contacting rubber hydrochloride surfaces.

Closure for Envelopes and the Like, A. L. Godoy, Mexico City, Mexico. U. S. 2,400,406, May 14. A container having a closure flap, an attaching member secured to the container and having a smooth exterior surface, a transverse reinforcing strip on the lower portion of the attaching member, a sealing tab secured to the closure flap and having its free end reverted to form a finger piece adapted to register with said reinforcing strip when the tab is moved to closed position.

Dispensing Device, P. R. Nelson & R. C. Phillips, Los Angeles, Calif. U. S. 2,400,435, May 14. A device for dispensing tape comprising a casing for holding a roll of said tape, said casing having an opening through which said tape is led; an arm projecting from said casing and under which the tape is fed from said opening.

Portable Carton, C. A. Stopper (to Diamond Paper and Box Co., Philadelphia, Pa.). U. S. 2,400,443, May 14. In a carton having top and bottom members and end wall members, the latter being provided with slits, an arm secured to one of said first mentioned members, and a terminal portion on said arm, tabs secured to the marginal side edges of said terminal portion and adapted to be bent into engagement with portions of said slits, and equipped with tabs that act to reinforce the end of the carton.

Can Cooler Loading Machine, S. A. Campana, San Francisco, Calif. U. S. 2,400,484, May 21. In a machine for loading a can cooler or the like, an elevator under which the cooler may pass, conveying means, a counting device associated with said conveying means for counting cans and having means for varying the count of can in alternate rows of cans, and means for advancing the cans.

Slitting Machine, J. A. Aycock (to Rock Hill Printing & Finishing Co., a corporation of Delaware). U. S. 2,400,527, May 21. In a web slitting machine, a rotary platen roll slidably journaled for rotation, circular cutting members pressed peripherally against said platen roll to effect slitting of web material.

Case Unloading Machine, A. C. Davis, Baltimore, Md. U. S. 2,400,542, May 21. A machine for removing bottles from compartment cases comprising means for advancing each case in turn with a step-by-step motion bringing each row of compartments in the cases in turn to rest in a predetermined bottle row gripping position, the cases and bottles being upright.

Multiple Purpose Card Table Accessory, M. Skinner, Kokomo, Ind. U. S. 2,400,610, May 21. In a box structure a pair of duplicate open-top shallow box units arranged in longitudinal alignment with adjacent ends abutting.

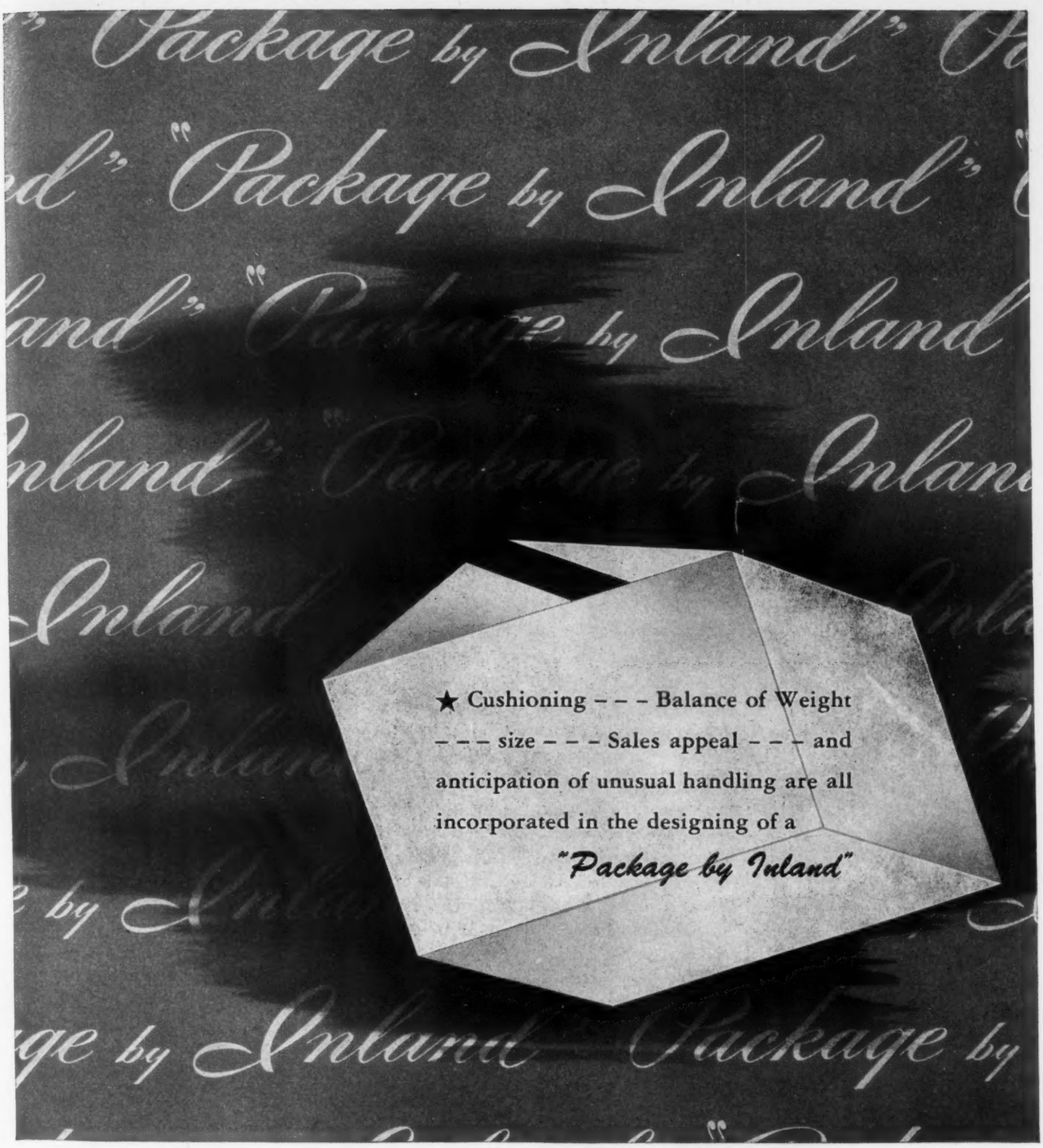
Closure Cap or Stopper for Containers, A. C. Vivian (to Anglo-Iranian Oil Co., Ltd., London, England). U. S. 2,400,614, May 21. A closure cap mechanism for mounting upon containers more particularly adapted to hold liquids and provided with a charging and discharging orifice comprising a closure cap adapted to be removably associated with the orifice with brackets disposed on opposite sides of said cap and in fixed relation to each other.

Machine for Boxing Cartridges or Other Elongated Articles, D. R. P. Jackson (to Molins Machine Co., Ltd., London, England). U. S. 2,400,695, May 21. In a machine for feeding articles, the combination with a downwardly extending first guide in which articles are stacked in superposed relation, and means to lower the articles so stacked at a controlled rate, said last named means comprising an endless conveyor having blades arranged to extend between successive articles at one side of the stack, and a second guide at the other side of the stack approaching in a downward direction.

Container, H. J. Sattler, Philadelphia, Pa. U. S. 2,400,716, May 21. A collapsible tube of fibrous material comprising a pair of semi-rigid, approximately plane walls joined by re-entrant side walls, each of the latter comprising a plurality of approximately plane walls joined to each other and to the first mentioned plane walls along well-defined fold lines, each of the plane walls forming the re-entrant, side walls being re-inforced by rigid material arranged so that substantially no distortion of said walls will take place with the reinforcements terminating short of said fold lines so that the rigidity of the reinforcements does not interfere with collapse of the tube, and the means providing an outlet for the contents of said tube.

Hypodermic Needle Case, H. L. Swann, Brinkley, Ark. U. S. 2,400,722, May 21. A syringe case having an open end in which the needle end of a syringe is positioned, said case having a contracted portion intermediate its ends, a rubber plug positioned within the contracted portion, dividing the case into a sterilizing solution-containing chamber, a removable rubber plug closing one end of the sterilizing solution-containing chamber, said plugs adapted to grip the syringe needle.

Nonrefillable Container, N. Archidiacano, Boston, Mass. U. S. 2,400,730, May 21. As a new article of manufacture, a self-contained check-valve unit adapted to be fixed within the neck of a bottle to control the flow therethrough, said unit comprising a sheet metal housing element moulded to shape from a single piece of sheet metal so as to provide the same with a cylindrical lower portion provided at its top with a vaulted top wall having a centrically constricted outlet port surrounded by a cylindrical external spout flange and having at its lower end an inwardly extending radial valve seat flange surrounding a centrally disposed inlet port.


★ Cushioning – – – Balance of Weight
– – – size – – – Sales appeal – – – and
anticipation of unusual handling are all
incorporated in the designing of a
"Package by Inland"

INLAND
CONTAINER CORPORATION
Corrugated Fibre Boxes

INLAND BOXES

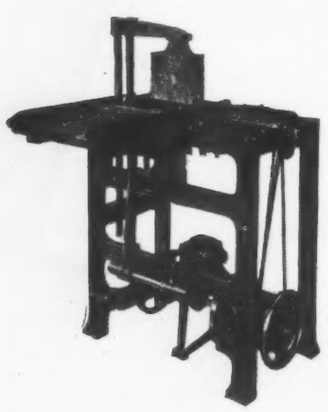
INDIANAPOLIS, INDIANA • EVANSVILLE, INDIANA • MIDDLETOWN, OHIO • CINCINNATI, OHIO
DAYTON, OHIO • CHICAGO, ILLINOIS • MILWAUKEE, WISCONSIN • DETROIT, MICHIGAN

CUT COSTS
SPEED WORK
SAVE LABOR
In Carton Packaging

Are you enjoying the broad cost saving advantages of PETERS economical packaging machines in your carton packaging department? Many plants are still using slow, expensive hand methods, when PETERS semi-automatic and automatic machine units could do the same job much better, at lower cost and with less labor.

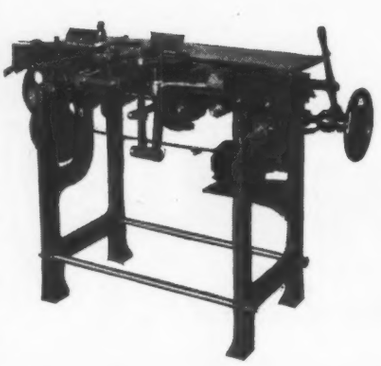
If you are seeking ways to cut your production costs, step up your output and increase profits, investigate these machines today.

Send us samples of the various cartons you are now using. We will gladly make recommendations for your specific requirements.



This PETERS JUNIOR CARTON FORMING & LINING MACHINE sets up 35–40 cartons per minute, requiring only one operator. After the cartons are set up, they drop onto a conveyor where they are carried to be filled. Machine can be made adjustable to handle several size cartons.

This PETERS JUNIOR CARTON FOLDING & CLOSING MACHINE closes 35–40 cartons per minute, requiring no operator. After cartons are filled, they enter machine on conveyor and are automatically closed. Can also be made adjustable to handle several different size cartons.



PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

The milk containers . . .

(*Continued from page 97*) asserted, containers cost twice as much as they do at present, there would be few of them used; and if they cost half as much, milk would be sold in no other way. Here is a challenge to research and where tremendous efforts are being made.

It must be realized, of course, that existing plants have a considerable investment in glass operations and would increase their costs by adding paper operations to their present capacity. In addition, it is inexpedient for milk dealers to abandon glass when they still serve the home delivery market unless they maintain a separate paper operation, which is only practicable for the larger dealer.

In many markets the consumer price of milk in paper containers has been maintained at one cent above that in glass bottles. In this fashion, those milk dealers incurring higher operating expenses because of the use of paper were able to absorb these additional costs.

However, those plants which were completely established on a paper basis automatically experience certain advantages. Also, plants which serve larger stores where the sales per stop are markedly higher enjoy net savings in using paper in comparison with glass because their economies in delivery are considerably above the average. Thus, Spencer in his study of the costs of milk distribution in New Jersey[8] showed that total processing and distribution costs for milk in New Jersey in paper containers averaged 4.1 cents per quart, or about 0.6 cent less than the corresponding cost for for milk delivered in glass bottles.

As Spencer stated, however, such costs can be realized only where the route loads are high, the sales per stop large and the store handles the milk of one dealer exclusively.

With the growing availability of plant equipment, it is predicted that the production of paper containers will grow from the present level of 2 billion containers a year to at least 3 billion. Many markets still exist where the paper container has made little or no inroad in the store and wholesale market. Even at present cost levels the paper container will experience considerable expansion.

The glass bottle manufacturers have not been idle during the last few years. They have developed the square bottle which occupies less space than the conventional bottle and is lighter in weight. In this fashion, glass enjoys some of the advantages in delivery that only paper has hitherto possessed. At the same time the additional cost of the single service container is avoided. The square bottle has been adopted in many markets and has made possible the expansion of route loads.

The square bottle, however, still requires the same handling by the route-man, retail merchant and customer as the conventional round bottle. It is lighter

[8] Spencer, Leland, "Cost of Distributing Milk in New Jersey," New Jersey State Dept. of Agriculture, 1943.

Plastic container shown in illustration contains a Perm-O-Comb, manufactured by Eastern Seaboard Plastics.

LET YOUR PRODUCT

Speak for Itself

IN AN...

Arnrus

PLASTIC CONTAINER

All Shapes
All Protected
All Features

When your product speaks for itself . . . and shines forth in original color and beauty—through a form-fitted transparent plastic container—that's when customers step up to buy your product.

That's when profits step up!

Made by the National Transparent Plastics Company, Arnrus products have had the benefit of war-time research and experience. Such experience has developed Arnrus Plastic Packaging so that it successfully competes in price with other types of boxes.

And exceeds all in sales appeal!

Write for full information.

NATIONAL TRANSPARENT PLASTICS COMPANY

SPRINGFIELD MASSACHUSETTS

Dress Up Your Product in

LUSTEROID *Vials and Tubes*

The call to the colors has made LUSTEROID a favorite in today's distinctive packaging. Merchandisers like the almost unlimited choice of colors available in these crystal-clear plastic containers.

What's more, LUSTEROID is feather light, yet strong, rigid and unbreakable for perfect protection and product display. Saves money, too, in packaging, shipping and through elimination of labeling costs.

Sizes from 1/4" to 1-1/4" in diameter. Lengths up to 6". Cork, slip-on or crew-cap closures. Write for details.

LUSTEROID CONTAINER CO., Inc.

Formerly Lusteroid Division of Sillcocks-Miller Company

Office and Factory

10 W. PARKER AVENUE, MAPLEWOOD, N. J.

MAILING ADDRESS: SOUTH ORANGE, N. J.

than the old bottle and occupies less space, but it cannot with tand the attractiveness of the paper container in many segments of the store market and, if the price of paper is reduced, in the whole market.

In summarizing, the use of the paper container involves many economies in processing and delivery but these are not usually sufficient to offset the increased cost of the container except in instances where the large sales per stop made possible greater savings in delivery. However, plants which are exclusively devoted to paper operations afford greater savings in processing. Also, consumers and retail merchants prefer the paper container because of greater convenience. Indeed, in many markets a large proportion of the market has been willing to pay an additional penny for milk packaged in the paper container. Because of these factors paper will continue to expand substantially even at present cost levels, but an overwhelming shift to paper will require a decrease in the cost of paper containers.

Role of designer . . .

(*Continued from page 94*) engravings, pull color proofs on the stock which is to be used for the finished product, and submit the proofs to the client for a final check. Often, too, a design studio equipped to do such work will offer its services to other designers.

Mildred Lucas appraises the designer's cooperation with the suppliers by saying: "In the reproduction of the design, the artist's cooperation with the supplier is part and parcel of his best service. Very often a slight revision can be made in the design by the artist which will enable the supplier to manufacture the package more economically and with better machine precision. By the same token, it is well for the artist to check the supplier so that no liberties are taken which might benefit the supplier but work havoc with client and results."

Ben Koodin concludes: "We have always found that when the suppliers have been given to understand that they have an important contribution to make toward the over-all effectiveness of the packaging program, they are most cooperative and helpful. The outstanding package is the result of close coordination between the triumvirate; client, designer, supplier. There is room enough for all to take a bow for its success."

From William O'Neil, on the other hand: "The final phase—cooperation with the supplier—is similar to the first hundred miles for the infantry. They certainly make it tough for a designer. On this phase alone, the designer earns his full fee in holding out for the results projected in the earlier stages."

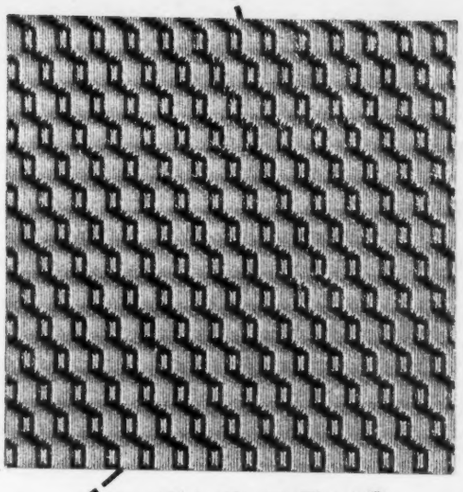
The designer's job often does not end even when the finished package goes on the client's production line. In spite of the best preliminary testing and consideration in the world, most packages *can* be improved upon. Ideas for better marketing features may come after the introduction. Especially when the designer is on an annual basis it is up to him to follow his package, watch its reception, and suggest necessary changes.

Striking

878 BLUE FOIL #261

RICH

ENAMELAY FOIL 275-DM



COLORFUL

RENAISSANT FOIL 300-B

It's always *Hampden*

For the right paper for your box

Decorative foils

Colored and embossed

Designs and patterns

A set of sample sheets mailed on request

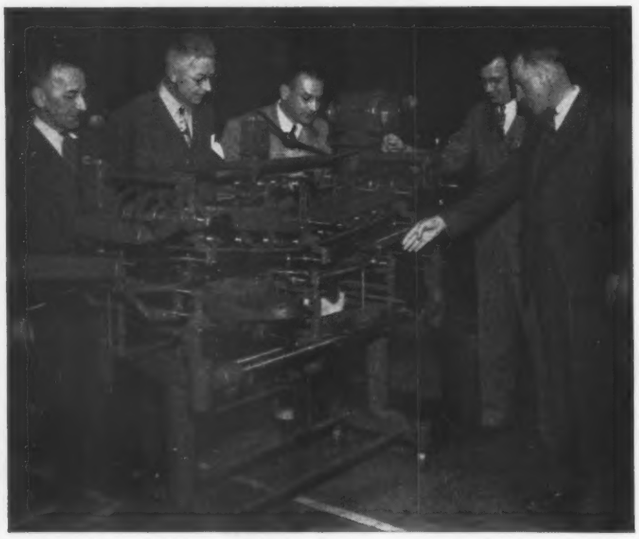
Hampden GLAZED PAPER & CARD COMPANY

Holyoke, Massachusetts

CHICAGO, ILL. • DALLAS, TEXAS • NEW YORK, N. Y. • PHILADELPHIA, PA. • SAN FRANCISCO, CALIF. • SEATTLE, WASH.

TORONTO, CANADA • FRED'K. JOHNSON CO. LTD., LONDON, ENGLAND

All Users Agree



New Way Labelers are the Most Versatile and Simplest to Operate

It is so easy to change to any size label within New Way's range which covers all containers from 1¾″ to 6¹¹/₁₆″ in diameter and 1¾″ to 9″ in height. Three simple adjustments: handle to set diameter—handle to set for height—handle to set gluepot . . . each operation made accurate by vernier scale.

In mechanical construction, New Way stands out because of its precision workmanship . . . thus insuring many years of trouble-free operation under all conditions. Enclosed drives minimize noise and wear . . . and the New Way Labeler can handle containers as fast as the closing machine can deliver them.

New Way Labels can be supplied also for cans with bale ears and long-neck bleach bottles.

Write to Hanover, Pa., for complete details of Labelers that will stand up under overloading.

THE BEST OF Everything IN LABELING AND CASING EQUIPMENT

Chisholm-Ryder

COMPANY OF PENNSYLVANIA

HANOVER, PENNSYLVANIA

Simplified boxes . . .

(*Continued from page 114*) printed on an overwrap of either clear waxed paper or cellophane.

Exclusive of the two variations of this design already mentioned, there is a third. This is simply an adaptation of the conventional telescope box, involving two No-Glu trays, one slightly larger than the other. It is reported that in addition to their application to the dried fruit and frozen foods fields all three variations of the No-Glu design, as well as the Flip-End and Snap-Up designs, have withstood rigorous tests and are currently being adapted to a wide variety of commodities.

The Flip-End tray (Fig. 7) is unusual in that when formed the end sections are higher than the sides. Its rigidity and visibility when filled and overwrapped with transparent film makes it admirably suited to the packaging of scores of dry commodities, such as cookies and cakes, which naturally lend themselves to visual package display. The method of manual set-up is as simple and as rapid as that employed for the No-Glu. However, the technique is slightly different in that the extended end sections are first turned outward to a vertical upside-down position. The action is then reversed by turning the wrists inward, which causes the folded tray to form square and brings the ends to an upright position with the interlocking tabs clamping over the corner folds of the set-up tray.

Designed for dry packaging of vegetable and other products which require dry ventilation, the Snap-Up box and tray (Fig. 9) employs glue and is manufactured on conventional right-angle gluing equipment. It reaches the user flat-folded, breaking at cuts and score lines which run through the center lengthwise. The box is set up by merely pushing inward and using the index fingers to push tabs on the external bottom flaps into die-cut slots in the bottom box. Here again the tension set up by the action of the locking features employs the natural resiliency of the board to make the box a rigid structure when formed.

Painter and his associate, Carl Fusco, who is in charge of promotion and licensing, are marketing the designs by granting manufacturing rights on a royalty basis under exclusive territorial arrangements.

CREDITS: *Asher date tray manufactured by Fleishhacker Paper Box Co., San Francisco.*

Package evaluator . . .

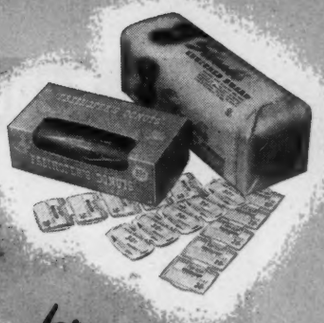
(*Continued from page 111*) so packaged in rigid transparent cellulose acetate.

Adaptability to Wrap and Label, Factor Ten, is again the functional need of speed and perfection in enclosing the product and identifying it with an all-over wrap, or label. This wrap can be a heat-sealing opaque or transparent film and the heat-seal label can be printed and coded during the wrapping operation. An ex-

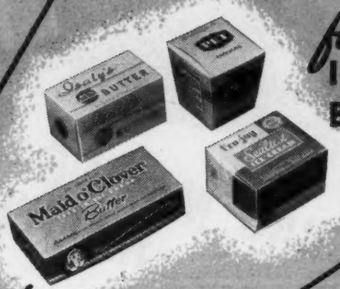
A Complete RANGE OF MATERIALS

FOR A COMPLETE PACKAGING SERVICE

- PAPER
- PAPERBOARD
- TRANSPARENT FILM
- ALUMINUM FOIL
- WAXED PAPER
- HEAT-SEALING COATED MATERIALS
- LAMINATED PAPER
- LAMINATED AND COATED GLASSINE
- LAMINATED PAPERBOARD



for BAKED GOODS



for ICE CREAM and BUTTER

for DRIED FOODS

for PRE-MIXED FOODS

for FROZEN FOODS

for PROCESS CHEESE

for MEAT PRODUCTS

for CONFECTIONS and TOBACCO

When you submit your package problem to Marathon, you receive (1) the recommendations of Marathon's highly skilled technical staff; (2) the quality-control advantages of Marathon's completely integrated production; and (3) the full benefit of Marathon's complete range of materials to assure you a package "built for the job."

MARATHON CORPORATION
MENASHA, WISCONSIN

MARATHON

HEAT SEAL-IT MACHINES

The first "low cost" bag and envelope making machine . . . no experience required for operation. Will make bags from 2" up to 6" wide and from 2" up to 12" long. No electric motor required. Automatic thermostatic control of all heating surfaces. Quick delivery. Write for complete information.

"CRIMP SEAL-IT"

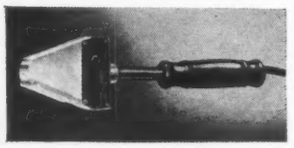
The New All Purpose Heat Sealing Machine

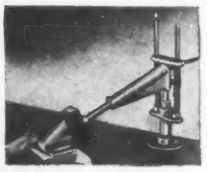
QUICK DELIVERY

Latest development in compact, low cost bag sealing equipment. Applies a perfect seal to all types of heat sealing bags, envelopes, etc. up to 7" wide by new highly efficient method of pressure application. ALSO FOLDS BAG, as it is sealed, in one sure quick operation. Automatic thermostatic heat control. Heavy duty gear head electric motor. Write for additional information.

HAND SEAL-IT

Aluminum hand-sealing iron containing 2 built-in sealing surfaces. Automatic thermostatic control adjustable to any heat sealing wrapping material.





WRAP SEAL-IT

Ingenious, foot-operated heat sealing iron — frees both hands for wrapping. Production 50% faster . . . safer and more economical.

WRITE FOR CATALOG! . . . ILLUSTRATING COMPLETE LINE INCLUDING 12-F FOOT MODEL AND "PACER" HEAVY-DUTY MOTOR-DRIVEN BAG SEALERS

HEAT SEAL-IT COMPANY

LANCASTER AND PARRISH, PHILADELPHIA 4, PENNA.

ample is First National Stores' Joan Carol cake.

After totaling the score and charting it you proceed to the last of the four groups, *psychological factors*. Yes, packages should be psycho-analyzed. Consider Mr. Bendix's remark again"—people are prone to be charmed—" and the No. 1 charmer is in the form of Sensory Stimuli. It pertains to the senses, which are stimulated in varying degrees. For instance, the transparent acetate box for candy shown in Fig. 5 clearly shows the delicious milk chocolate candy, plus the rich nutty caramels and refreshing peppermint sticks. According to psychologists, this is sensory stimuli at its best; the package would have a higher score than an opaque box with a colorful, illustrated inscription "milk chocolates, caramels and mint sticks." This in turn would have a higher sensory stimulation than a plain box with the generic term at its simplest—merely "candy" or "sweets."

Quality Appeal means that the package gives an aura of quality to the product. Psychologists again tell us this striving for quality or social distinction is one of the strongest motivating forces in human behavior. Eaton's stationery, as shown in Fig. 5, is an excellent example of quality appeal.

No. 8, Prestige, is somewhat difficult to measure. Popularity, acceptance or importance based on past achievements or reputation all can be considered as rules of measurements. An excellent example is Heinz ketchup. To many it indicates that meals of quality are served where they see this bottle on the table.

An Appealing Trade Name (No. 10) is one of the most important factors in this group. The trade name should be short, easy to read, easy to pronounce and descriptive. A shining example is CRAX. This should rate a Perfect Factor Value score.

Consensus of Opinion is the average opinion by several judges on their general feeling toward the package.

After this group has been scored and the total charted on the bottom side, the final evaluating can be easily arrived at by joining the opposite X's with two straight lines, as illustrated in Fig. 1. The point where the lines intersect will fall in one of the five zones marked Excellent, Good, Fair, Poor or Very Poor.

It can be noticed immediately that an increase in the score of any one of the major groups tends to place the package in a better grade. Remember, too, that even though your package falls in the "Good" section, it may be in the lower half of the arc, or still on the minus side of "Good," and an improvement in any group has a tendency to place it on the other side of the fence.

A glance will tell in what factors the package is weak and where it is strong. For instance, if the "gloss" score is low due to a dull, soft coating that picks up dirt, you can call in your package supplier and request a high and hard gloss coating with certain characteristics that will not impair the score of the other factors.

A stimulating conference on packaging in all of its ramifications as well as a better appraisal of the package may be had by inviting the sales manager as well as the production manager when the evaluation is made.

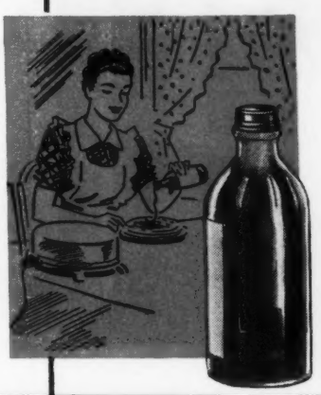
GLASS CONTAINERS FOR FOOD PRODUCTS A 2 to 1 CHOICE!

Twice as many women shoppers prefer foods packed in *glass.* Their emphatic 2 to 1 vote was established in a recent national survey of representative products* by a noted public opinion analyst.** Glass containers are able salesmen!

These are some of the reasons housewives give for their preference.

VISIBILITY

"That *looks* delicious!" A glass container proudly exhibits the full goodness of its contents—and then the product sells itself. Customers *see* it's just exactly what they want!

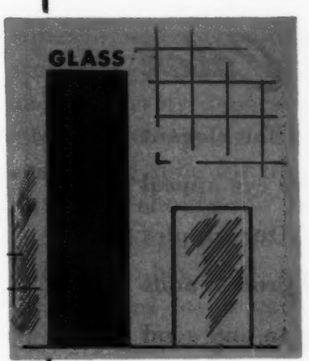


CONVENIENCE

Time-saving glass containers are easy-to-open, to reseal . . . safely guard left-over portions. Sparkling syrup bottles have a place on the table . . . stickiness is easily wiped off!

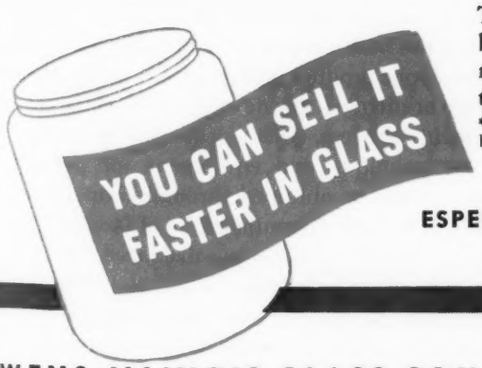
PROTECTION

Glass faithfully safeguards flavor, quality. Coffee vacuum-packed in Duraglas Ultra-Vac jars is delivered roaster-fresh. Flexible cap provides positive reseal between uses.



PREFERENCE

In modern, self-service stores especially, women are attracted by the products that look good . . . are enticed by the spick-and-span sparkle of glass. Yes—*your* customers prefer glass!



The popularity of these containers is growing . . growing because their many advantages are basic. You sell more—need less selling time with products packed in glass containers—Duraglas Containers!

*Average is based on eight key classifications: pears, peaches, fruit salad and cocktail, baby food, coffee, salad or cooking oil, beets, food-beverages.

**Name supplied on request

ESPECIALLY IN Duraglas CONTAINERS

OWENS-ILLINOIS GLASS COMPANY · TOLEDO 1, OHIO · *Branches in Principal Cities*

Styled in Color

There is no substitute for elegant color styling to improve eye appeal and stimulate sales. Our duplex (two-coat) COLOROID process adds new life and brilliance to any good product marketed in large volume. If your present production on plain glass containers is in large volume, we invite your inquiry.

COLOROID Corporation

W. 58th & Walworth Avenue, Cleveland 2, Ohio

Flying machines . . .

(*Continued from page 117*) —measuring 27 in. wide, 70 in. long and 52 in. high, and weighing only 1,200 lbs. From the Kono-Mead plant in Flushing the machines are trucked to LaGuardia field and readily loaded abroad a Douglas C-47 freight plane. The machine is simply lashed in place alongside other cargo; no crating is required. A Kono-Mead engineer accompanies each machine to supervise unloading and installation.

The "Roto" bag machine fabricates bags with combination heat- and glue-sealed seams. Cellophane—or any other heat-sealable film—feeds from a roll at one end of the machine and completed bags are ejected at the other end at the rate of 5,000 to 15,000 an hour, depending on the size of the bag. The bags may be single-walled or duplex bags in sizes from 2 in. to 18 in. long and from $1\frac{1}{2}$ in. to 9 in. wide.

Among the features claimed for the machine are:

Simplicity of design provides ease of operation essential to high speed and low maintenance costs.

Positive heat control by electronic pyrometer.

Instantaneous application of heat to center seam by use of automatic solenoid.

Low-voltage transformers give longer life to heaters.

Automatic stacking in predeterminable quantities.

Accurately adjustable printing register control in convenient location for operator.

Position of former holders permits rapid change of bag sizes.

Cut-off accomplished by self-sharpening shear action.

Operates on 110 to 115 V., 50 or 60 cycle A.C., and is powered by $\frac{1}{3}$-hp. electric motor.

Built-in cabinet houses extra impedimentia.

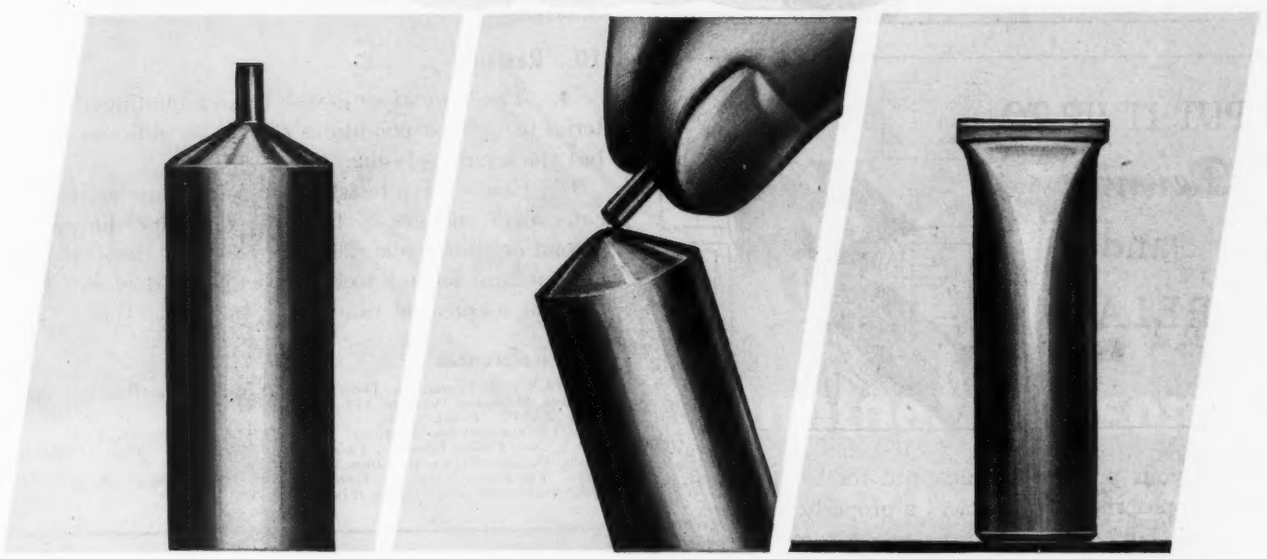
Questions and answers . . .

(*Continued from page 144*) resulting loss of vitamin potency and development of bad odors and flavors. Even if you package this material in a hermetic metal can, sufficient oxygen can be present to start this decomposition. The best packaging for this material would be a hermetically sealed can which has been vacuumized or filled with an inert gas. Your product is finely divided and it might slow down your packaging line if you vacuumize, since finely divided powders tend to be pulled out of the can during removal of the air.

Probably the best method for you to use is to remove the air from your product and replace it with either carbon dioxide or nitrogen at one of the later stages of your manufacturing process, such as the final mixing operation. The technique and equipment for performing this operation can be obtained through your supplier of metal cans or through manufacturers of food processing equipment. After you have once displaced the air from your product, it can be handled, filled and closed in the normal manner, except that some precautions and minor equipment changes might be necessary to maintain the inert atmosphere over the product at all times.

WIRZ *Mono-Pak*

SINGLE-USE TUBE — IDEAL SAMPLING AND DISPENSING UNIT FOR YOUR PEACE-TIME PRODUCTS



Easy to open—easy to use—safeguards flavor, consistency—assures exact dosage

Individual portions of coffee, dehydrated soups, juices, pastes, hydroscopic powders and granular products, ointments, and toilet preparations will be more acceptable to your Peace-time markets in sanitary, convenient WIRZ Mono-Pak single-use collapsible metal tubes. Hermetically sealed, non-refillable, economical, WIRZ Mono-Pak Tube preserves your product's original freshness, purity, consistency, flavor, or scent. Prevents substitution, dispenses exact quantity. Product reaches your customer in perfect condition. Easy to open, easy to use, WIRZ Mono-Pak Tube can be attractively decorated. Requires no labeling or capping. This unusual merchandising tube for liquids, pastes and powders should be in your Peace-time packaging and sampling plans. WIRZ Tubes are practical in different sizes for a variety of products . . . with suitable linings to combat corrosion and seepage. Count on WIRZ Tubes to protect your product, your brand name and your markets.

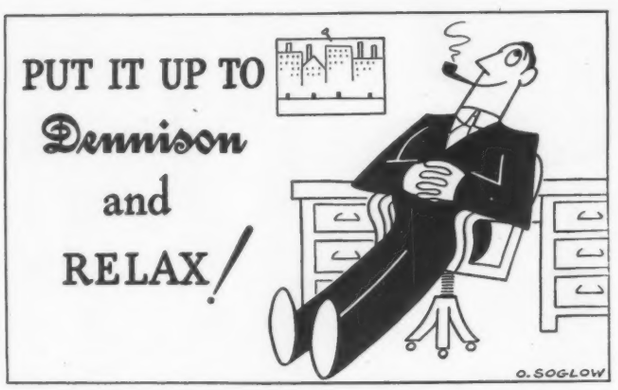
A. H. WIRZ, INC. Fourth & Cole Sts. CHESTER, PA.

Established 1836

COLLAPSIBLE METAL TUBES • LACQUER LININGS • WAX LININGS • WESTITE CLOSURES
HOUSEHOLD CAN SPOUTS • COMPRESSION MOLDING

New York 17, N.Y. 50 E. 42nd St. | Chicago 4, Ill. 80 E. Jackson Blvd. | Memphis 2, Tenn. Wurzburg Bros. | Havana, Cuba Roberto Ortiz Planos

A. G. Spilker { Los Angeles 14, Calif., 1709 W. 8th St. (Exposition 0178)—Also Danville, Calif.



IS your product handicapped for want of an appropriate package . . . a properly designed set-up box? Then it's time to do something—and the logical first step is to get in touch with Dennison.

Maybe it's smarter styling you want, the kind that adds point-of-sale glamour to a new perfume. Or do you need a protective feature such as used to cushion a thermometer? Perhaps you're looking for a combination unit, a dozen individual boxes in an easel-back display carton.

To the ingenuity Dennison displayed in 1844 when we produced the first domestic paper-covered box has been added a century of developments. Today we can offer low cost, automatic production for chain store packages, patiently engineered special constructions, or elaborate hand-finished cases for costlier merchandise.

If your product calls for set-up boxes, you'll know your problem will be approached with experience and understanding when you put it up to

Dennison

PAPER PRODUCTS THAT PRODUCE RESULTS

Dennison-created set-up boxes are helping other prominent manufacturers obtain better retail displays and sales. If you would like to give your product the same advantage, write today. Dennison Manufacturing Co., 2271 Ford Avenue, Framingham, Mass.

TAGS • LABELS • SEALS • SET-UP BOXES • MARKING SYSTEMS • PAPER SPECIALTIES

Pi standard test methods

(*Continued from page 142*) abnormal conditions were experienced during the period of testing or lack of uniformity of the material under test and the samples should be rerun.

9. Report

The standard procedure for reporting transmission values is as follows: The rate is reported as the *grams per 100 sq. in. per 24 hrs. at 0 deg. F. using calcium chloride.*

10. Remarks

A. The time (four days) for acclimating the material to the test conditions should be sufficient for all but thick multi-ply materials.

B. Consecutive tests made on some materials indicate small changes in transmission value during the second or third cycle (28-day cycle) but these changes are not large enough to be important. Most materials arive at a constant rate during the first cycle.

11. References

A. A.S.T.M. Committee D-6, *A.S.T.M. Standards on Paper and Paper Products*, December 1944, pp. 173–176.
B. TAPPI—T 464 M-44.
C. Government Specifications: JAN-P-131; AN-C-67b; AN-B-20.
D. "New Plastic Films. . . Their Packaging Qualities"—Capt. William H. Aiken, MODERN PACKAGING, June 1946, p. 141.
E. "For Better Usage. . . Terminology of WVT Testing"—C. A. Southwick, Jr., MODERN PACKAGING, July 1946, p. 137.

For better usage . . .

(*Continued from page 139*) **eability of less than 1 gram per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential.**

A semi-moistureproof material may be defined as having a water-vapor permeability from 1 to 3 grams per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential.

Any material having a water-vapor permeability over 3 grams per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential, shall be considered as having no effective level of moistureproofness.

Conclusions

Water-vapor permeability is defined as the amount of water vapor which passes through a given area of material under controlled and specified conditions of temperature and humidity.

The term "water vapor" and the word "moisture" may be used interchangeably but it is incorrect to use the term "moisture vapor."

Water-vapor permeability shall be expressed as *grams per 100 square inches per 24 hours at (specify) deg. F.* and *(specify) Relative Humidity with (specify desiccant) used in the cup* or as *grams per 100 square*

Want a Tamperproof Bottle?

Another Reason for CEL-O-SEAL

REG. U. S. PAT. OFF.

Start with a trusted name—add assurance that the quality it stands for has been well protected—and you can be sure of customer confidence.

So Wildroot seals with "Cel-O-Seal"—guarantees genuineness of the product—and shows it has been protected against tampering, leakage and contamination. Nothing can get into the container—nothing can leak out when a Du Pont "Cel-O-Seal" band is on the job.

And "Cel-O-Seal" bands serve as a colorful label... provide added merchandising effectiveness. There's *every* reason for selecting "Cel-O-Seal"—the seal with all-round advantages.

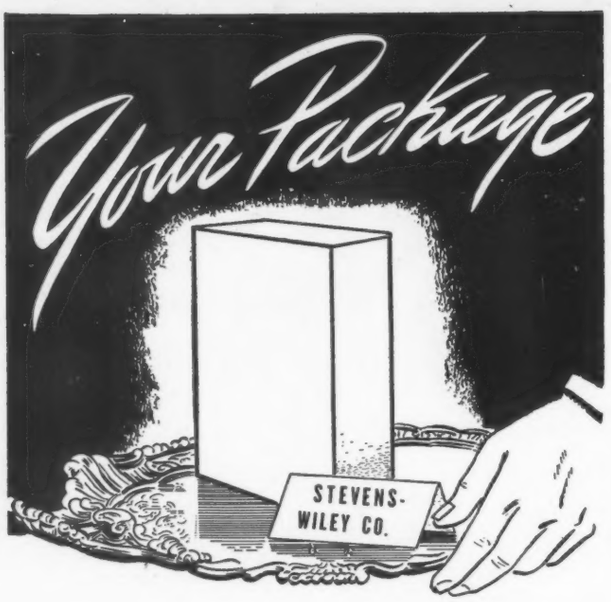
E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del.

DU PONT

REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT
"CEL-O-SEAL" BANDS



ON A SILVER PLATTER

Your product, in your container, physically packaged and labeled, comes back to you virtually "on a silver platter"—there in a few words is the story of the Stevens-Wiley custom packaging service. Complete, comprehensive, versatile . . . Stevens-Wiley service embraces any phase or every phase of dry packaging. Geared to the biggest jobs, our modern equipment can handle the little ones economically, too. Regardless of what your packaging problem is, why not let the Stevens-Wiley engineers plan an efficient production schedule that will dove-tail with your own equipment and facilities. No obligation for information.

WRITE OR CALL FOR ADDITIONAL INFORMATION

THE STEVENS-WILEY
MANUFACTURING CO., INC.
HANCOCK & W. BERKS STS.
PHILADELPHIA 22, PA. REGent 1616

inches per 24 hours at (specify) deg. F. and (*specify*) *water-vapor pressure differential.*

Water-vapor permeability values shall be determined at 100 deg. F. at a high vapor-pressure differential for materials which are to be used at temperatures from the freezing point of water to 120 deg. F. Water-vapor permeability values shall be determined at 0 deg. F. at high vapor-pressure differential for materials which are to be used at or below the freezing point of water.

The results of one method of determining water-vapor permeability shall not be calculated or corrected into other temperatures or test conditions, although weight or area units may be corrected.

A moistureproof material may be defined as having water-vapor permeability of less than 1 gram per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential.

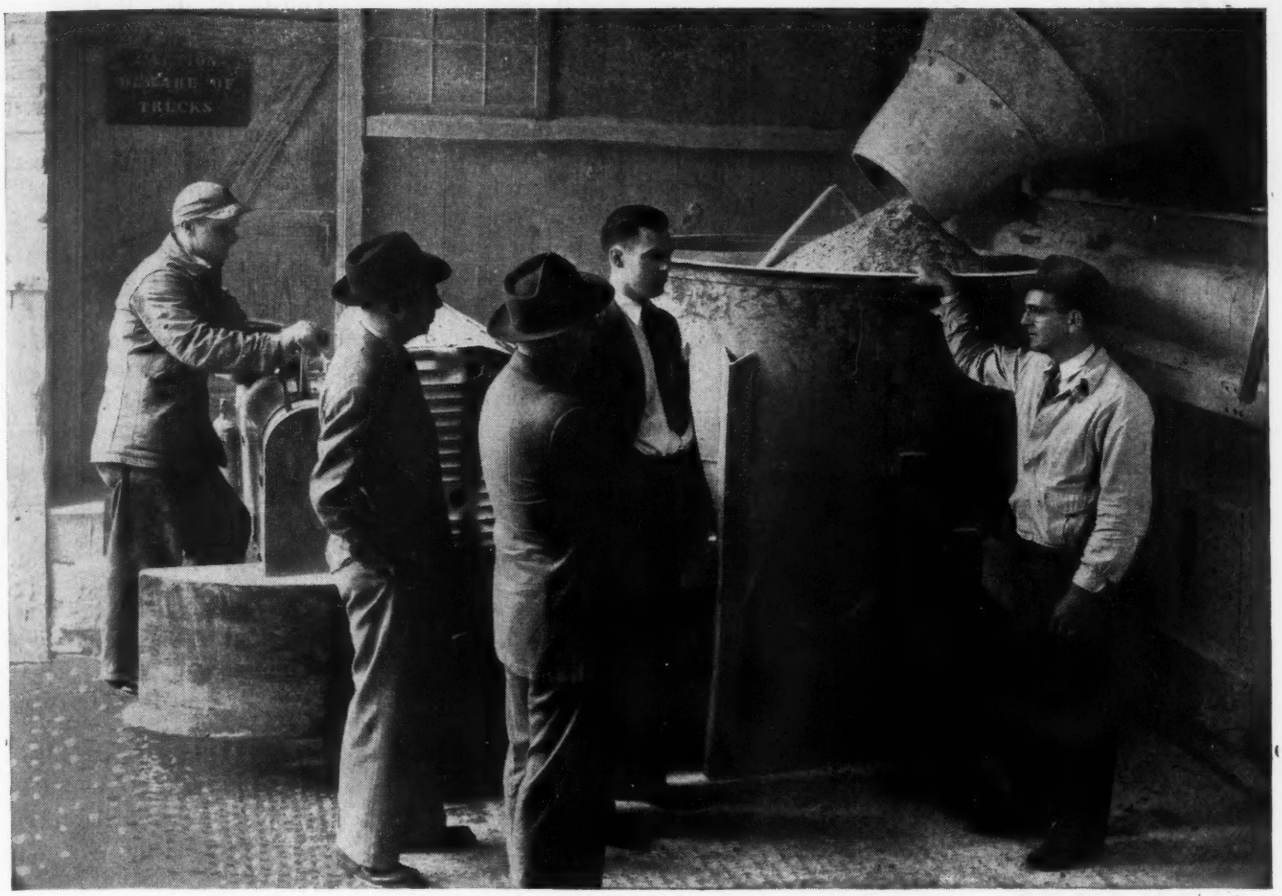
A semi-moistureproof material may be defined as having a water-vapor permeability from 1 to 3 grams per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential.

Any material having a water-vapor permeability over 3 grams per 100 square inches per 24 hours at 100 deg. F. at 40 mm. water-vapor pressure differential shall be considered as having no effective moistureproofness.

Food packaging studies . . .

(*Continued from page 143*) of those packages in which foil was used as part of the packaging material that greater protection was given in so far as increase of moisture content of the packaged vegetables was concerned. This was found to be true not only under high humidity conditions but also under conditions of high temperature and lower relative humidity (Table I). This is in contrast to studies on the use of foil in so far as water protection is concerned. Foil, even when laminated on highly resistant and rugged material, breaks easily, particularly at the corners, when roughly handled. Upon immersion of such types of packages, water seeps through the pinpoint cracks and thus the water protection value is lost. However, where water-vapor protection is concerned, the area of the undamaged foil is so large in comparison to the cracks that foil retains much of its water-vapor protection qualities.

Much attention has been given by various investigators to the relative effect of temperature and humidity where bulk packages are concerned. In the present studies, it was obvious over a period of approximately six months, that duplicate cases of dehydrated bulk packaged beets when stored at 120 deg. F. and 50% R. H. increased in moisture content perceptibly over similar packages stored at 90 deg. F. and 90% R. H. In certain cases in which beets were stored at 120 deg. F. with the lower R. H., the moisture content of the original beets increased 86% at the end of the six-month storage period. On the other hand, in one specific instance of 11 cases of beets stored in a single wax-coated rigid container, the moisture content was nearly doubled



"This is how we keep our glass furnaces from getting indigestion!"

If it never occurred to you that a glass furnace could get indigestion, perhaps you'd like to listen while Jack Elwell points out to a group of Armstrong's salesmen some things about the care and feeding of glass furnaces.

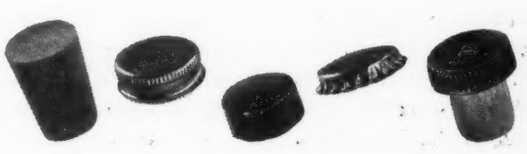
Jack, the veteran batch house foreman at Armstrong's Millville, N. J., glass factory, explains an important reason for the superiority of Armstrong's glass.

"If glassmaking ingredients are added to the furnace in large quantities, the heavy ones tend to separate from the lighter ones. The ingredients melt unevenly, causing lumps in the melt. The furnace literally has indigestion and produces glass that isn't uniform.

"To prevent this, each ingredient is carefully weighed. We mix our batch in cylinders which hold about 2000 pounds. By feeding our furnaces a small amount of the batch at a predetermined rate, we are assured of an even melt, and our customers get a more uniform glass."

Jack's comment is typical of the interesting and useful facts about making fine glass that Armstrong's salesmen pick up during their extensive sales training program in Armstrong's glass and closure plants.

This practical knowledge, gained first-hand from skilled men of long experience, helps your Armstrong's representative to do a better, more intelligent job of servicing your glass and closure needs. Call upon him for complete information about any of Armstrong's Glass and Closures or write direct to Armstrong Cork Company, Glass and Closure Division, 5907 Prince Street, Lancaster, Pennsylvania.



New
VYNCOTE
SERIES OF
Plastic Coatings

VYNCOTE
The Modern PLASTIC COATING
for Paper and Foil

Vyncote plastic coatings, vinyl plastics in solution, present unlimited opportunities in the paper and foil industries. In application a flexible surface film is formed that retains all the properties of solid plastics. The coatings resist water, grease, oil, chemicals, heat, etc.; and are completely adaptable to your baking cycle whether it is one of seconds or hours. The improved Vyncote is completely inert, non-toxic, tasteless and non-inflammable. One of the Vyncote series is being supplied commercially at 60% solids using high solids and inexpensive solvents, thus effecting important savings in application costs.

Vyncote is available in colors or water-clear, and provides attractive high gloss finishes free from creasing or cracking. It is a prescription coating compounded to individual requirements as to use and method of application. Write for the Vyncote Technical Data Folder containing complete information.

THE WATSON-STANDARD CO.
Manufacturers of
PAINTS • VARNISHES • INDUSTRIAL
FINISHES AND LITHOGRAPH COATINGS

Rx TOUGH JOB HEADQUARTERS
Prescription Finishes
Give us your metal coating problem. We guarantee you an answer based on your conditions, and not just a standardized formula.

FACTORY AND GENERAL OFFICES:
PITTSBURGH, PA. • WAREHOUSES:
BOSTON, BUFFALO, DETROIT, NEW YORK

at the end of six months at 90 deg. F., 90% R. H.

In all of these bulk package experiments, it was also obvious that at the higher temperatures the packages may exceed the resistance of the packaged dehydrated vegetables. In practically all instances, even in the controls in metal, stored at 120 deg. F., 50% R. H., beets and carrots were unpalatable after three to six months.

a. None of the non-metal packages studied were as effective as metal in protecting bulk packaged beets from water vapor when stored for a period of six months at 90 deg F., 90% R. H., and 120 deg. F., 50% R. H.

b. Dehydrated vegetables stored in non-metal bulk packages increased at least 10% in moisture content over a period of six months when stored at high temperature and high humidity, and in most cases the increase was from 25 to 100%.

Acetate adhesion . . .

(*Continued from page 121*) between cellulose acetate and other materials, such as paper. The wax works as a medium to reduce water-vapor transfer, where that is desirable, when acetate is used in conjunction with another porous material.

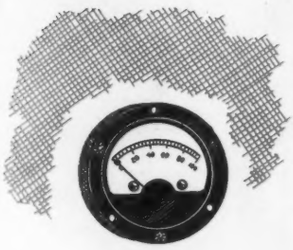
Most adhesive manufacturers are thoroughly familiar with the uses of acetate film and have established lacquer and resin compounds for all known operations. When presenting acetate adhesion problems, it is well to advise the supplier regarding the following points: (1) base stock to be used; (2) type of cellulose acetate to be employed; (3) method of applying adhesive; (4) physical properties of bond (5) aging properties.

ACKNOWLEDGMENT: *This article is based on information supplied by the Union Paste Co., Hyde Park, Mass., and Celanese Plastics Corp., New York.*

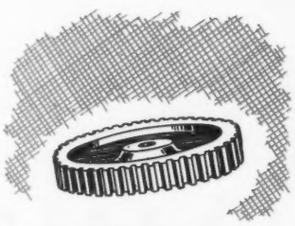
Market analysts awarded

Arno H. Johnson, director of media and research, J. Walter Thompson Co., is the winner of the first Annual Award for Leadership in Marketing given by the New York Chapter of the American Marketing Assn. Mr. Johnson's winning entry was "57 Million Jobs—A Postwar Goal and Opportunity," which shows how, within our free enterprise system, our standard of living can be raised through market analysis. Winners of the eight Meritorious Service Citations are Richard D. Crisp, sales analyst, S. C. Johnson & Son, Inc.; T. G. MacGowan, manager research department, The Firestone Tire & Rubber Co.; Don G. Mitchell, president, Sylvania Electric Products, Inc.; Alfred Politz, Alfred Politz Research; Ray B. Prescott, director of research, *Sales Management* magazine; Dr. Vergil D. Reed, associate director of research, J. Walter Thompson Co.; Everett R. Smith, director of research, Macfadden Publications, Inc., and Alexander O. Stanley, manager foreign sales and research department, Dun & Bradstreet, Inc.

Proved uses for K-D papers



METERS



MACHINE PARTS

INSTRUMENTS

TOOLS

STOP M.V.T.!

—with Keller-Dorian Functional Packaging Papers

MOISTURE VAPOR TRANSMISSION can be stopped . . . ending your costly corrosion problems with packages made of Keller-Dorian functional papers.

● **Heat-Sealable** – K-D functional packaging papers, in a lightproof aluminum foil lamination . . . are heat-sealable, greaseproof, flexible over a wide range of temperatures.

● **Stops Penetration — Dehydration** – With moisture vapor transmission cut to the irreducible minimum your products are protected from rust, corrosion and spoilage. In packaging food products moisture can be held in . . . minimizing costly weight loss.

● **Send Coupon for Test Samples** —Now you can test samples of K-D functional packaging papers in your own laboratory. Just send the coupon below. Prove to yourself that these papers will meet your own particular requirements.

KELLER-DORIAN
CORPORATION
Empire State Building New York 1, N.Y.

FUNCTIONAL PACKAGING PAPERS for Protecting Perishable Products

KELLER-DORIAN CORPORATION
Empire State Bldg., New York 1, N. Y.

Gentlemen:

Kindly send me samples of K-D functional packaging papers for testing purposes.

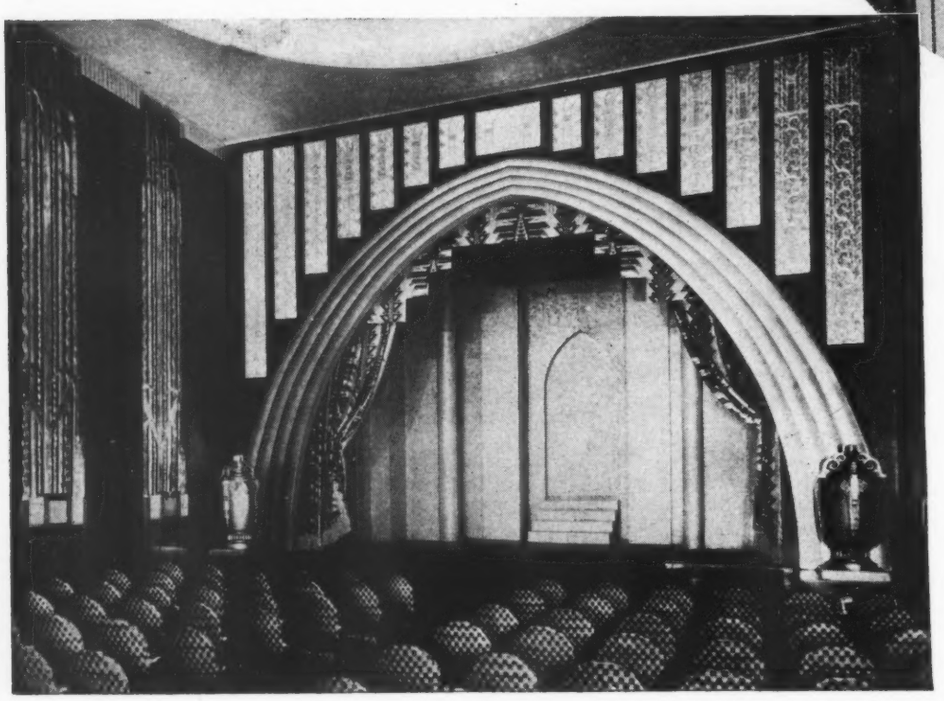
Name.....

Company.....

Address.....

City..... *State*.....

more importance for your New York film presentations and meetings . . . . . .



chanin building

122 EAST 42nd STREET
CORNER LEXINGTON AVENUE
NEW YORK CITY

The unique and impressive location of the CHANIN AUDITORIUM on the 50th floor of the nationally known CHANIN BUILDING in the heart of New York's Grand Central Zone gives an immediate importance to your film presentation. In the CHANIN AUDITORIUM it is YOUR show, completely separated from other possible conflicting activities, yet quickly accessible to the important, busy executives of many lines of business. About 200 comfortable, opera-type chairs, ample lounges, foyers and express elevators assure the comfort of your guests; while complete, permanently-installed motion picture, stage and broadcasting facilities are all at your disposal for events of the most varied natures and purposes. Space is also available adjoining the Auditorium for displays and serving of refreshments.

For complete information, including available dates for the 1946–1947 season, address

A FEW RECENT AUDITORIUM CLIENTS

American Bemberg Corp.
American Paper & Pulp Assn.
Associated Motion Picture Advertisers
Associated Wool Industries
Blake-Finn Law Lectures
Borden-Farm Products
Calvert-Maryland Distilling Co.
Cavendish Trading Corp.
Chevrolet Motor Company
Wendell P. Colton Advertising Co.
Columbia Concerts Corp.
Columbia Pictures Corp.
Copeland & Thompson, Inc.
Dwight School
Educational Film Corp. of America
General Outdoor Advertising Co.
Grand Guignol Players
Horse & Horseman, Inc.
Kelvinator Corporation
Lee & Phillips, Inc.
Lily-Tulip Cup Corp.
Lockhart International, Inc.
March of Time
Martini & Rossi
Metro-Goldwyn-Mayer
Metropolitan Players
National Board of Review of Motion Pictures
New York University School of Architecture
Oldetyme Distillers Corp.
Pan-American Airways System
Pathe News, Inc.
Patescope Co. of America, Inc.
Pedigreed Pictures, Inc.
Raymond-Whitcomb, Inc.
Rex Cole, Inc.
RKO-Radio Pictures, Inc.
Shell Union Oil Co.
Sainer-Berkman Bar Study Group
St. John's University Stagers
Robert Louis Stevenson School
The Texas Corporation
United Artists Corp.
United Hospital Campaign Committee
Universal Pictures Corp.
U. S. Resettlement Administration
Young & Rubicam, Inc.

CHANIN MANAGEMENT, INC. + 122 EAST 42nd ST. + NEW YORK CITY

The Eyes have it!

Today's shopper often buys solely on visual appeal.
At modern retail counters the eyes have the say when buying
decisions are made. Countless new products, mass displays
and self-service retailing demand eye appeal in your package.

A. P. G. transparent, semitransparent and opaque bags and
envelopes in a complete range of sizes and styles,
artistically printed, will keep your product in sight.

Now, more than ever, we are equipped to produce flexible
packaging which beckons the eyes that buy.

MEMBER FLEXIBLE PACKAGING INSTITUTE fpi

Let us place at your service qualified representatives capable of solving the difficult and the unusual packaging problems.

APGCO

The American Paper Goods Co.

OVER 50 YEARS OF SERVICE

KENSINGTON, CONNECTICUT CHICAGO, ILLINOIS

Sales Offices — New York · Chicago · Boston · Philadelphia · Charlotte · Atlanta · Cincinnati · Minneapolis · Fort Worth · San Francisco · Seattle

Clearseal

NEW PLASTIC COATED FOILS, FABRICS AND PAPERS TO WATERPROOF AND MOISTURE-VAPOR PROOF PACKAGES. ALSO, PROTECTION AGAINST MILDEW, ACID, DAMPNESS AND RUST.

CLEARSEAL
CLEAVELAND LABORATORIES

"The Miracle of Plastic Coating"

mailed on request

CLEAVELAND

LABORATORIES AND MANUFACTURING CO., INC.

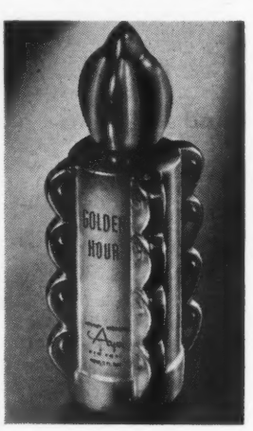
Pioneers in the application of Plastic Coatings to Textiles and Paper
Peapack, N. J., 7905 Empire State Bldg., New York, N. Y.
Sole Distributor: NATIONAL COATED PRODUCTS CO., 40 Worth St., New York (13) Tel. Rector 2-5446

LAMINATED PAPERS

HAVE you planned for the unusual demand for this type of product after the war? • Ask about machines for laminating foil, paper, glassine, cellophane and boards. • We build them for pastes, glues, asphalts and waxes. • Can we send complete information? Ask us.

•

HUDSON-SHARP
MACHINE CO • GREEN BAY • WIS

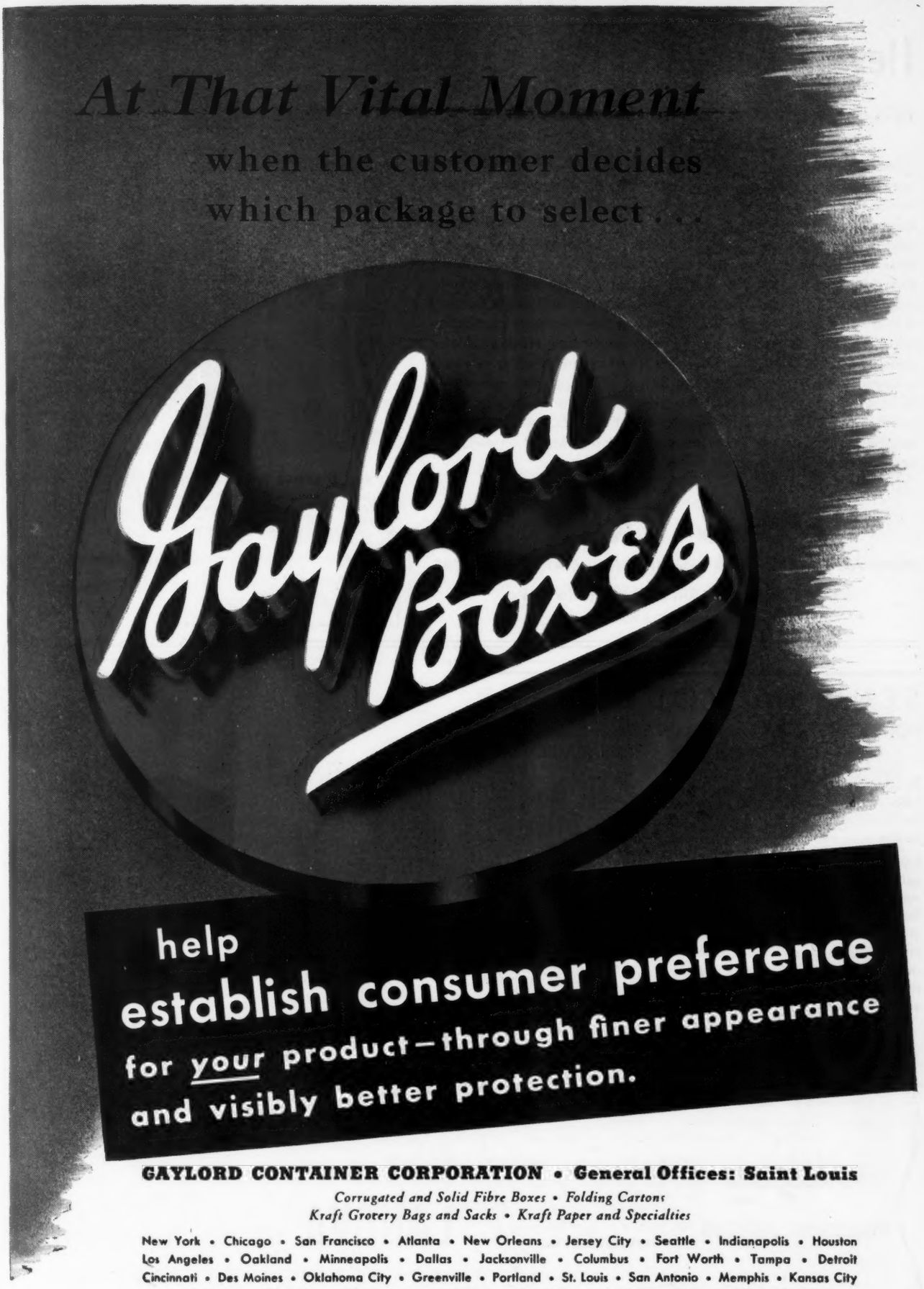


Decorators on Glass and Plastic Containers Since 1936

•

4 Colors in One Operation —Finest Detail

Aniqraphic Process, Inc.
11 BROADWAY, NEW YORK 4, N. Y. • WHITEHALL 3-5253



GAYLORD CONTAINER CORPORATION • General Offices: Saint Louis

Corrugated and Solid Fibre Boxes • Folding Cartons
Kraft Grocery Bags and Sacks • Kraft Paper and Specialties

New York • Chicago • San Francisco • Atlanta • New Orleans • Jersey City • Seattle • Indianapolis • Houston
Los Angeles • Oakland • Minneapolis • Dallas • Jacksonville • Columbus • Fort Worth • Tampa • Detroit
Cincinnati • Des Moines • Oklahoma City • Greenville • Portland • St. Louis • San Antonio • Memphis • Kansas City
Bogalusa • Milwaukee • Chattanooga • Weslaco • New Haven • Appleton • Hickory • Greensboro

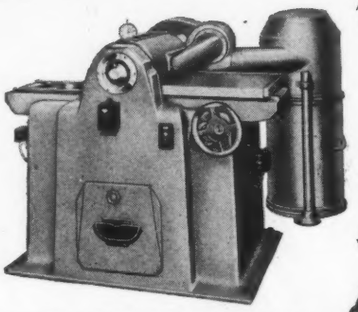
Hess & Barker's 4 to 6 Color Press

cuts production and maintenance cost 'way down

Three presses operating in two nearby plants for more than seven years have accumulated very interesting production and maintenance figures. In one plant, a million hairline register 4 color coffee bags (4 up) were delivered in less than 28 hours. On another regular million run, an ink saving of $138.00 was made. There is no risk with Hess & Barker's 4 to 6 color press, because it has been severely tested for seven years and proved successful in two different plants.

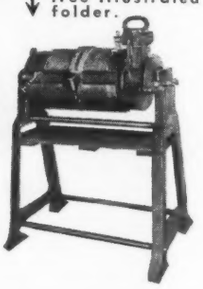
A demonstration will prove the wide capacity of Hess & Barker's 4 to 6 color press. At the same time, you may examine production and maintenance figures and see for yourself how much your own costs can be reduced. How an extra set of cylinders will give you a circumference range from 19" to 32" in ½" steps—the advantage of owning several presses at the price of only one. Why you are guaranteed 100% hairline register at all speeds, without making additional adjustments. How evenly ink is distributed on solids or one point rule. (Roll or sheet delivery optional.)

↑ **HESS & BARKER 4 TO 6 COLOR ROTARY PRINTING PRESS**



THE HESS & BARKER PLATE REGISTERING MACHINE

that registers plates swiftly, accurately, safely for little money. Send for free illustrated folder. ↓



THE HESS & BARKER ROTARY SHAVER

with less moving parts, for simplicity, accuracy, durability and safe operation. Controlled heights guaranteed within .001". For better printing plates, send for free illustrated folder.

HESS & BARKER

PRINTING PRESS AND EQUIPMENT MANUFACTURERS

212-22 S. Darien St., Philadelphia 7, Pa.

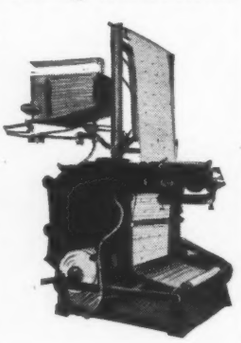
Telephone: PE 5-4070

An illustrated booklet will be sent free on request.

SEND US YOUR PAPER

FOR CONVERTING...LAMINATING...COATING ... ANALINE PRINTING . . . ROLL EMBOSSING

In addition to turning out The Milgate Line of "Specialty Papers," we have facilities available in our mills for converting your own paper stock to order.



From the standpoint of delivery, it will naturally operate to the customer's advantage for him to supply the necessary stock. Milgate manufacturing resources give you the benefit of research and improved methods, developed for the production of special, protective, government packagings. It will pay you to investigate this custom converting service...now.

The regular Milgate Line will eventually include all types of cloths, acetates, foils, boards, glassines, cellophanes and papers, "hot-melt," emulsion or solvent coated and/or laminated. Analine printing and roll embossing add to its versatility. We solicit your inquiries. Send us your name . . . today.

THE Milgate LINE

If you have your own paper stock for converting, get in touch with us at once and receive full particulars by return mail.

PACKAGING DIVISION E. W. Twitchell Incorporated **784 Public Ledger Building Philadelphia 5, Pa.**

GIVE YOUR PRODUCT NEW PERSONALITY USE LANOVA SPECIALTY AND BOX PAPERS

Instant delivery—right from stock on most items.

- Metal Foils
- Fancy's
- Embossed
- Wood
- Pyroxylin
- Velours
- Trade Marks
- Flints

Write for sample sheets and books — no charge or obligation.

LACHMAN NOVASEL PAPER CO.

109-111 Greene Street • New York 12, N. Y. • WOrth 4-6426

complete, *adj.* 1. No part lacking. 2. Perfectly equipped.—*Syn.* Entire, total.

. . . as in Betner packaging service

The dictionary says those things, and more, about the word "complete."

Customers say those things, and more, about Betner Packaging Service.

Glad they are to find, at Packaging Hq., as much or as little, package-wise, as their set-up needs. Some want us merely to make their bags. O. K. Others enlist our artist-specialists to design a bag, and our presses to print it. O. K. Still others take our newest service, the installation of Benco machinery for loading and sealing their product. O.K.

Some want the works! Oh *Kay!*

Yes, "complete" is the word for what we have in the way of packaging service; as much or as little of what we have as pleases you. Ask for more "complete" details; no obligation, of course.

Benj C Betner Co DEVON, PA.

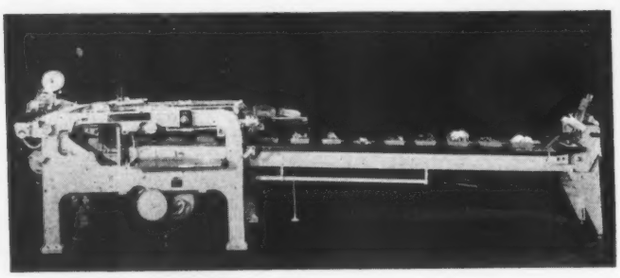
BENJ C BETNER CO OF CALIFORNIA, LOS ANGELES, CAL.

1 Automatic Imprinting and Heat-Sealing of Labels

The automatic imprinting and heat-sealing of labels to the wrapper is a new money-saving advantage in the packaging of many articles. The Roll-Type Labeller of the "Oliver" Wrapping Machine uses colorful diecut labels (printed by "Oliver") in a continuous roll. The title, price, quantity and code can be automatically imprinted on each label just before it is heat-sealed in the proper position to the wrapper. Rolls of labels are simple to stock, low in cost.

2 Quick, Easy Adjustment for Package Size

The "Oliver" is the one machine which can wrap an infinite variety of products in cartons, trays, U-boards or flat cards, in the widest range of sizes. You can adjust the "Oliver" for package size in a minute or two. Adjust the wrapper length while the machine is in motion. *A girl can operate the "Oliver."*



The "Oliver" has many advanced features to give you the finest wrapping at low cost. *Write for details.*

OLIVER MACHINERY COMPANY, GRAND RAPIDS 2, MICH.

"OLIVER"

AUTOMATIC VARIETY WRAPPING MACHINE

★ Here is an exciting new kind of label. It adheres firmly to any smooth surface—metal, plastic, glass, wood, painted or varnished. Won't dry out and fall off—yet like magic is easily peeled off in one piece without leaving a trace! ★ At last you can place instructions, warnings, tradenames, describe finishes, point out features, directly on the product at the very place such data should be carried. ★ When these Kum-Kleen stickers have served their purpose, they may be peeled off without scraping or tearing—a feature your customers will appreciate. ★ They are quickly applied without moistening—are available in any size, shape or color, printed to your specifications. ★ These are the same famous stickers so widely used in war and peace time production to carry instruction, rejection and inspection data.

Send for sample and complete information Address Dept. MP-7.

AVERY ADHESIVES, 451 E. Third St., Los Angeles 13 · New York, Boston, Detroit, Chicago, Pittsburgh, San Francisco, Atlanta, Kansas City, Mo. In Canada, Enterprise Sales, Toronto

AVERY **Kum-Kleen** STICKERS

TUBULAR *Paper* PACKAGES

Tubular Paper Packages have very wide use under present post-war conditions. They are sturdy, lightweight, and can be attractively decorated in a wide range of colors.

DIAMETERS: 1/16" TO 2½" IN ANY LENGTHS

Ask for Quotations

DIAMOND STRAW & MACHINE CO

114-116 East 16th Street
New York DIAMOND N. Y.

S/V Product 2305 Provides a Strong Bond —and a Barrier to Moisture-Vapor

Inherently adhesive, flexible and highly resistant to moisture-vapor, S/V Product 2305 and other Socony-Vacuum microcrystalline waxes provide many advantages over water-soluble binders such as starch, dextrine, silicate of soda and casein.

They're easy to apply, provide a strong, uniform bond between even widely dissimilar papers. Their flexibility at low temperatures is a prime factor in packages for frozen foods, dehydrated foods and other perishables. Because they form a continuous film of wax between the paper plies, they offer a barrier to moisture and moisture-vapor. This provides important advantages in most packaging applications.

Proved under exacting wartime requirements, Socony-Vacuum microcrystalline waxes are now available in volume to give you superior laminated paper for improved peacetime packaging. Get the facts from your Socony-Vacuum Representative.

What's New in Petroleum for PACKAGING!

FROZEN FOODS
S/V Microcrystalline Waxes
Impart flexible moisture-vapor proof coatings.

★

DEHYDRATED FOODS
S/V Microcrystalline Waxes
When used as coatings, keep contents dry.

★

CONTAINER LININGS
S/V Microcrystalline Waxes
Protect interiors of barrels, drums, tank cars.

★

BEER CANS
S/V Petrosenes
Give flexible inert linings.

★

HEAT-SEALING
Special Waxes
Produce tough, tenacious seals on paper.

★

EXPLOSIVES
S/V Waxes, Petrolatums
Waterproof and seal dynamite sticks.

★

HYDROFLUORIC ACID
S/V Cerese Waxes
Add strength to waxes used for containers.

★

RUST PREVENTIVES
S/V Sova Kotes
Keep metals from rusting in storage.

SOCONY-VACUUM OIL CO., INC.
26 Broadway, New York 4, N. Y., and Affiliates: Magnolia Petroleum Company, General Petroleum Corporation

Process Products
SOCONY-VACUUM

INVESTIGATE
SOCONY-VACUUM PROCESS PRODUCTS
Research and Service

Eye Appeal...

Attraction - power, through eye appeal, is the primary duty of any display or package.

To attract buyers for your products, your lithographed advertising must be attractive in design and color harmony. It must be seen, it must be eye-tractive.

The Sale Lithograph Company has had long and varied experience in creating and producing colorful labels, displays, box wrappers and all other types of lithographed advertising materials.

The SALE LITHOGRAPH CO.

Color Lithographers

Since 1904 Devoted to the Production of Fine Lithography

PACKAGES

that made the

WALLS BULGE

WHEN YOU READ THIS all the tempests and turmoil of moving will be over and the Blue River Plastics Manufacturing Corporation . . . bag and baggage, plant and office . . . will be sitting pretty in our more convenient and far more commodious quarters at 329 Canal Street, N. Y. C.

IN THE OLD PLACE at 473 Hudson Avenue, Brooklyn, the demand for the famous Blue River Dual-Purpose Container grew . . . and grew . . . until the walls bulged and still we were bumping into one another in our rush to get these smart new plexiglas containers into the eager hands of waiting manufacturers. Now in our new and really roomy headquarters, we're able to meet and promptly satisfy all comers looking for a distinctive package, combining counter appeal with lovely, lasting home use.

BLUE RIVER PLASTICS

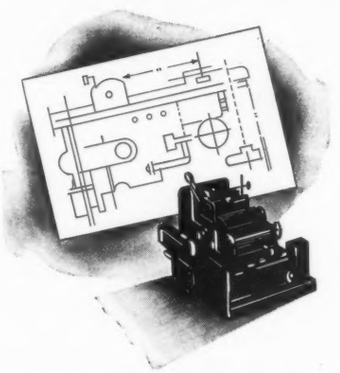
MANUFACTURING (BRP PLASTICS) **CORPORATION**

Fabricators and Designers — Of Plastic Originals

329 Canal Street — New York 13, N. Y.

F. J. Nussbaum, President — *Walker 5-2679*

DESIGNERS AND BUILDERS OF SPECIAL (not Standard) PACKAGING MACHINERY



Write or phone for appointment

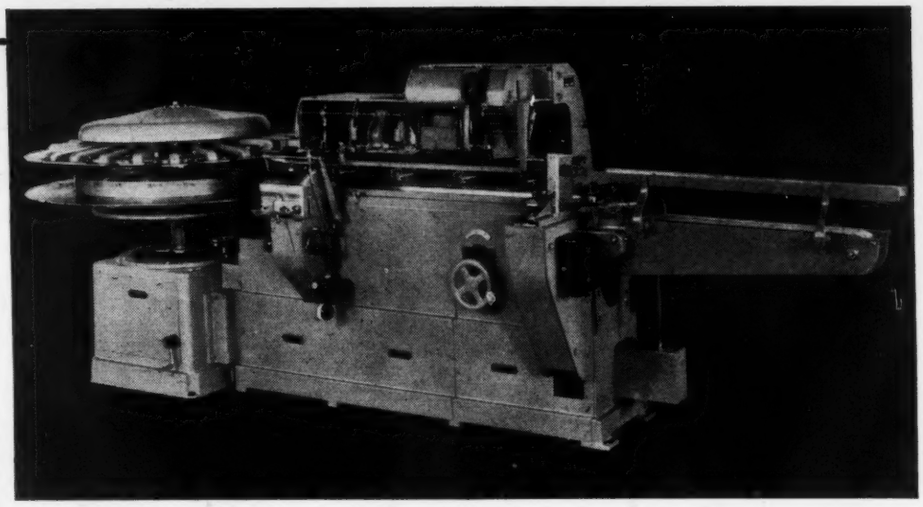
MIAMI INDUSTRIES, INC.,

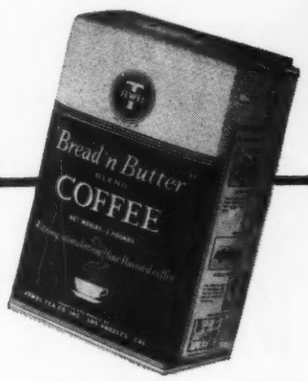
201 Morris St., Toledo, Ohio

LET

SEALTITE

CUT YOUR PACKAGING COSTS





IMPORTANT savings invariably result when a SEALTITE Bag Sealer is installed in a packaging line. Some users report costs as much as $500.00 lower per month per machine than with previous methods of packaging.

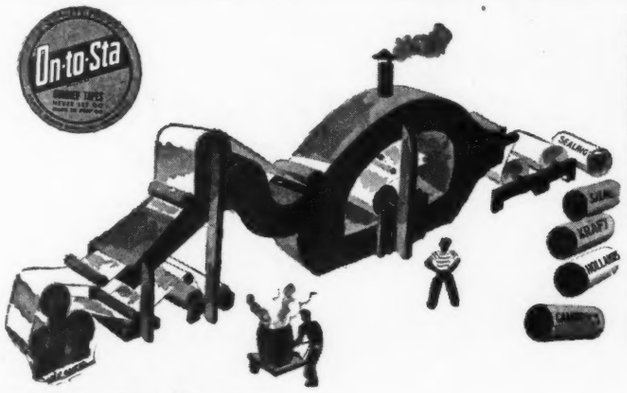
SEALTITE is fully automatic. It opens bags, fills, settles, shapes and seals at speeds ranging from 30 to 50 bags per minute on standard gusseted 2 to 10 lb. paper bags. SEALTITE delivers a square, flat-topped, sift-proof package that stacks like a carton.

If you are packaging in paper bags, write for information on SEALTITE.

CONSOLIDATED PACKAGING MACHINERY CORP.

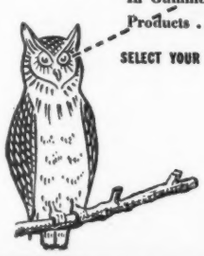
BUFFALO 13, N.Y.

On-to-Sta



BE WISE

In Gummed Tapes and Specialties, ALWAYS USE *"On-to-Sta"* Products . . . because they're *made to Stay On.*



SELECT YOUR GUMMED TAPES AND SPECIALTIES FROM OUR COMPLETE LINE

GUMMED SISAL TAPE ■ HEAVY GUMMED KRAFT ■ GUMMED CAMBRICS * ■ GUMMED SEALING TAPE, PLAIN & PRINTED * ■ "CARPAC" REINFORCED SEALING TAPE ■ ASPHALT LAMINATED WATERPROOF PAPERS, REINFORCED AND DUPLEXED ■ VENEER GUMMED TAPE ■ GUMMED HOLLANDS * ■ "SOLSEAL" WATERPROOF TAPE ■ CREASED GUMMED STAY * ■ COMBINING

* SAMPLE BOOKLETS UPON REQUEST

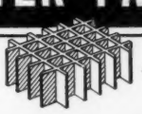
ATLANTIC GUMMED PAPER CORP.

MANUFACTURERS OF *"On-to-Sta"* GUMMED PAPERS

PLANT & MAIN OFFICE: ONE MAIN ST., BROOKLYN 1, N. Y.

BRANCH OFFICES: PHILADELPHIA • PITTSBURGH • CHICAGO • BUFFALO • BOSTON • ATLANTA • LOS ANGELES • HAVANA

FOR BETTER PACKAGING



WRITE, PHONE or WIRE for Quotations on Your Requirements for

PARTITIONS

IMMEDIATE ATTENTION
Given to Requests for Estimates

Prompt Deliveries Guaranteed

PETER

Reasonable Prices Assured

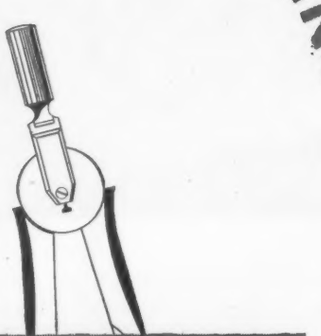
PARTITION CORP.

Manufacturers of Partitions for Paper Boxes

647-649 LEXINGTON AVE. BROOKLYN 21, N. Y.

Telephone: FOxcroft 9-2129

HIGH PRESSURE CASTING OF ZINC & ALUMINUM · COMPRESSION & INJECTION MOLDING ·



Consistent
PRECISION
Persistent
PRODUCTION

PLASTIC & DIE CAST PRODUCTS CORP.

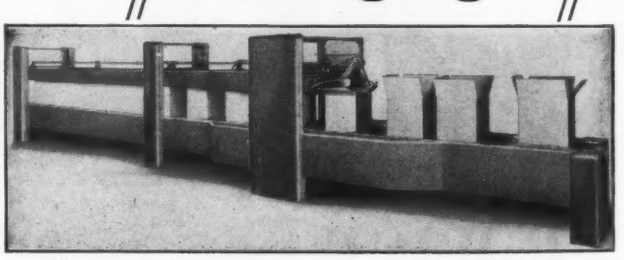
Roy L. Peat, President *Established 1920*

1010 EAST 62ND STREET, LOS ANGELES 1, CALIF.

BINGHAM BROTHERS
ESTABLISHED 1826
"STAR" ADHESIVES
BINGHAM BROTHERS
ESTABLISHED 1826
"STAR" ADHESIVES
BINGHAM BROTHERS

***BINGHAM BROTHERS COMPANY** • Main Office: 406 Pearl Street, New York 7, New York • Baltimore, Philadelphia, Rochester, Newark and Garwood, N. J.*

Designed for Efficient Packaging



ABC *Automatic Top and Bottom* CASE SEALER

Modern, streamlined design . . . requires no operator. Seals 30 cases per minute . . . both top and bottom, top only or bottom only. Fingertip control. Extra-rigid construction. Adjustable to 6"-18" width, 8"-30" length, 3"-28" height.

Special Engineering Service

Packaging machines correctly designed and constructed to fit your own special requirements.

ABC PACKAGING MACHINE CO.
QUINCY, ILLINOIS

A little Texcel adds more "sell"

To help a package ring the bell!

To modernize your packages,
To hold and seal as well –
It's Texcel Tape - so sturdy, neat
And packed with "super-sell".

"TEXCEL" REG. U. S. PAT. OFF.

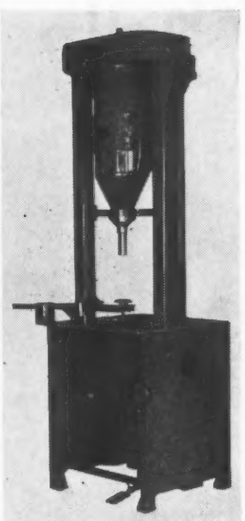
INDUSTRIAL TAPE CORPORATION

New Brunswick, N. J.

NEW S&S

Universal

FILLING MACHINES



. . . for filling practically any material but liquids

Incorporating many improvements, this new model of our old, reliable Universal Filling Machine, is designed to do an even better job than its popular predecessor. The new machine features heavier construction where needed, increased drive efficiency and greater convenience for the operator.

This means added operation proficiency, steadier production and lower cost packaging for the user . . . for you. S&S Universal Fillers are supplied as one, two or four station machines; auger or centrifugal feed to accommodate material to be filled.

Packers of nationally known products have followed our recommendations for the best methods of filling and handling their packaging—with excellent results. Now is a good time to consult us about *your* packaging problems . . . without obligation, of course.

Although deliveries are uncertain, due to an accumulation of back orders, it will pay you to wait for an S&S machine, the *right* machine for the job.

STOKES & SMITH Co

Frankford, Philadelphia 24, U. S. A.
FILLING . PACKAGING . WRAPPING MACHINES
Speeds to suit your needs: 15—30—60—120 per minute

"Better machines for better packages"

THE CADO **FLO-MASTER**

Writes • Draws • Marks
on Any Surface

THE packaging industry has adopted FLO-MASTER as a help in the designing room, in the factory, in the shipping department. FLO-MASTER speeds up operations, writes, draws, marks thin, medium or broad lines on paper, cellophane, wax, fabric, metal or *any* other hard to mark surface. *Perfect legibility.* FLO-DRI Inks (black and colors) dry instantly. Ask for FLO-MASTER from your supplier or write us for details now.

CUSHMAN & DENISON MFG. CO.
135 West 23rd Street New York 11, N. Y.

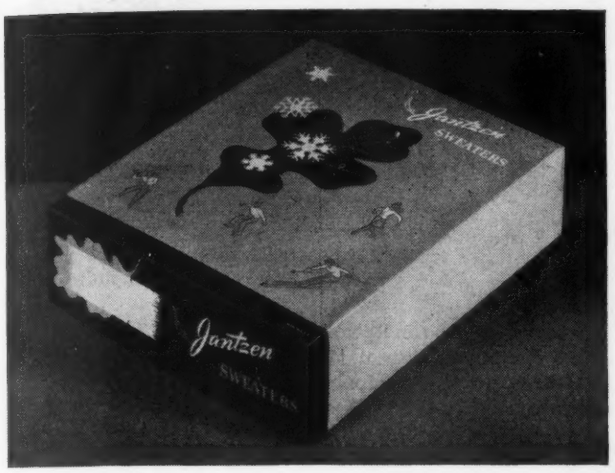
TRANSPARENT PLASTIC BOXES • CANS

MAKE YOUR PACKAGE STAND OUT

SEND FOR SAMPLES AND ILLUSTRATED CATALOGUE

WEINMAN BROTHERS
Transparent Box Headquarters
325 N. Wells St., Chicago, 10

Good Package Design



IMPORTANT TO MERCHANDISING AND TURN-OVER

Attractive packaging makes merchandise desirable. . . . It is the silent salesman of your product on retailers' shelves.

Recognized for their contribution to outstanding design in modern packaging, the ability and experience of the WLS staff of artisans are at your service.

Interview with Principals • No Obligation

36 Pages . . . 420 Pictures . . . an Exhibit of Performance
Write for a copy of it Today on your business letterhead

AMERICA'S LARGEST ORGANIZATION SPECIALIZING IN MERCHANDISE PRESENTATION

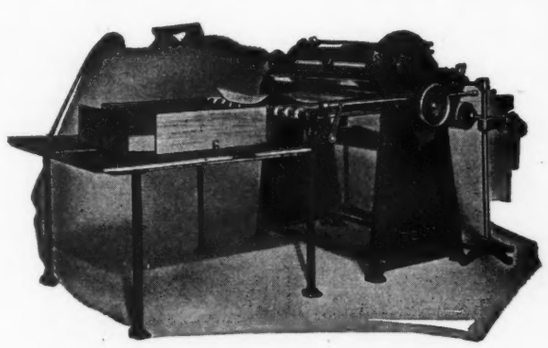
W. L. STENSGAARD AND ASSOCIATES, INC.

327 N. JUSTINE ST. • CHICAGO 7, ILLINOIS

ARE YOU EQUIPPED to meet RE-CONVERSION and its acutely keener competition?

BECK SHEETERS designed and built for the mastery of accuracy and low costs, possible only through their dependable and automatic operation: these can be the unfailing answer to your needs.

Equipped with **ELECTRIC-EYE** and **SHEET-PILER** with AUTOMATIC LOWERING TABLE represents the latest in high production, automatic sheeting work.



CHARLES BECK MACHINE CO.

13th & Callowhill Streets Philadelphia, Pa.

WOOD Caps

ANY SIZE
ANY SHAPE
ANY COLOR

with rust-proof metal inserts pressed in securely for perfect fit

We have made millions of wood caps for leaders in the Cosmetic field.

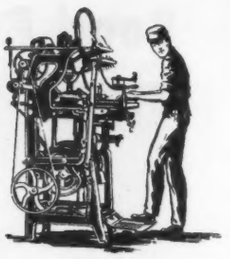
Let us plan with you on your next packaging problem.

Delivery 4 to 6 weeks

Gibson Jones Co., Inc.

400 Madison Avenue, New York, N. Y.

Why is the foot treadle so wide on an ERMOLD



. . . they ask

The size of a labeler foot-treadle doesn't seem important . . . but it is. If it's too small it restricts the operator to a single position . . . invites fatigue. The result is a definite production lag.

The foot treadle on an Ermold Semi-Automatic Labeler runs the complete width of the machine. Operators can shift their position . . . postpone fatigue. All day production averages run to 40 containers per minute and upward.

Here is but a single small instance where thoughtful design, proved through years of operation, helps you to produce more labeling of the highest quality . . . with an Ermold.

ERMOLD LABELERS

EDWARD ERMOLD COMPANY
652 Hudson St., New York 14, N.Y.

WAXES

For paper board impregnation

100 YEARS

FOR DIP COATINGS
EMULSIFIED WAXES
COATING WAXES

•

Meet Army and Navy specifications
WAXES FOR FUNGUS PROOFING
Our laboratory will welcome your problems

•

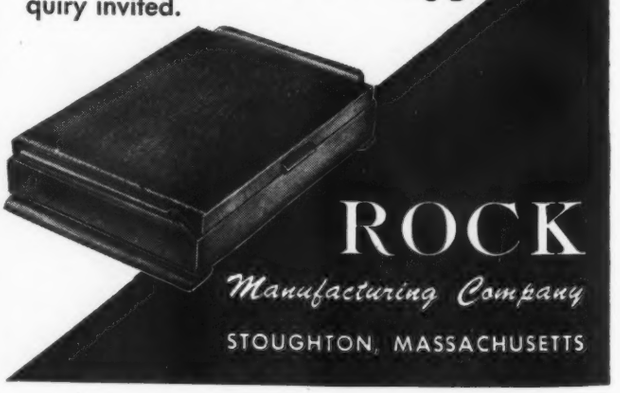
Zophar Mills, Inc. has been known for its dependable service and uniformity of product since 1846.

ZOPHAR MILLS, Inc.
Established 1846
106-26th Street • Brooklyn 32, New York

FINE WOODEN CHESTS BOXES • DISPLAY CASES

"From Standing Timber to Finished Product"

We specialize in the design and manufacture of silverware chests, jewelry and display cases, wooden boxes, packing cases and other wood containers. Your inquiry invited.



ROCK
Manufacturing Company
STOUGHTON, MASSACHUSETTS

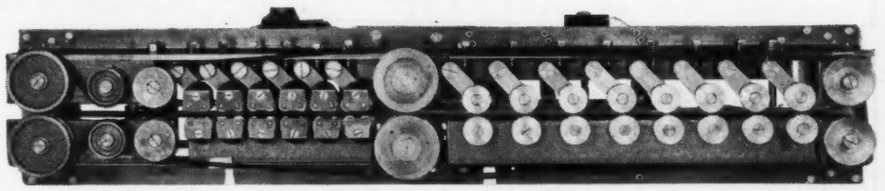
WRAPADE *Introduces*

another in their well-known line of heat-sealing machines, born of thirteen years of progress and experience in manufacturing machines to help increase your production.

New Wrapade continuous heat-sealer in action

1. This machine is quickly adjustable for heat, pressure, speed and has elevation control for varying bag sizes.
2. It can seal all heat-sealing bags.
3. Can handle the production of two filling machines.

Bottom view of mechanism of the new Wrapade continuous heat sealer



call or write

WRAPADE MACHINE CO., INC.

FACTORY OFFICE

778 Bergen St., corn. Grand Ave. Brooklyn 16, N. Y.

Telephone: NEvins 8-8052-3

Here's what (AND ONLY WHAT) *Contract Packaging* can DO for YOU:

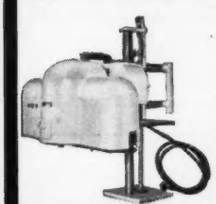
1. *Increase Production* and give you fast action when you need it.
2. *Minimize Overhead* for sampling and test marketing, for seasonal and supplementary production.
3. *Cut Unit Costs*, because your contractor has super-speed equipment which your own requirements alone wouldn't warrant.
4. *Save on Freight*, when your contractor is close to your suppliers or your distributing market.
5. *Control Costs* down to the penny on a per thousand basis.

No single packager has everything. But among our members is the one who has the facilities you need. Don't try hit-or-miss contacts . . . deal with recognized firms. Write or wire

NATIONAL ASSOCIATION OF CONTRACT PACKAGERS

111 West Washington St. • Chicago 2, Illinois

PACK-RITE *Heat Sealing Packaging* *MACHINES*

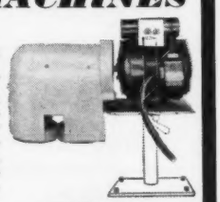


"SPEEDSEALER" ROTARY

DOUBLE DRIVE

Both sealing roller shafts driven in unison to insure perfect mesh and contact of sealing roller faces. Thus, bag or material travels through rolls on perfectly straight line. Vertical-krimp, horizontal-krimp, checkered-krimp or flat-face sealing rollers obtainable.

FEATURES a preheater-conveyor unit (detachable). ALSO a cooler-pressure conveyor unit (detachable). Speeds up to 300 or more lineal inches per minute. Can be operated vertically, horizontally, or angle. No carbon points or brushes. Spiral lift jack. Forward-backward adjustment. Speedsealer obtainable in wide variety of assemblies. Quotation promptly furnished for your assembly.

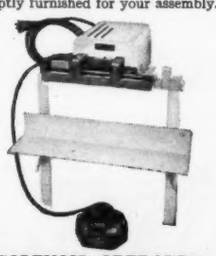


"FACT-TITE" ROTARY

Speeds to 300 or more lineal inches per minute depending on material being sealed. Thermostat control. No carbon points or brushes. Powerful construction. Vertical, horizontal or angle operation.

$175

Lifting & Lowering Device $12.50 Extra, if desired



SOLENOID OPERATED "TECH-MASTER" SEALER

MAGNETICSOLENOID OPERATION. No foot pedal required. Operator merely touches safety foot switch. Brief second required for most material—Works like a CHARM! Long life-replaceable-ram solenoid. Vertical-krimped, horizontal-krimped or flat-face sealing bars obtainable. $132.50 to $137.50.

"MULTI-USER" SEALER

Light weight—Compact—3-heat switch. For flat-sealing, spot-sealing, overlays, etc.—Packages of all sizes and shapes. Only $19.50.

PACK-RITE MACHINES MP
714 West Wisconsin Ave., Milwaukee 1, Wis.

Please rush complete information on your heat sealing machines to:

Attn. of.....
Firm.....
Address.....
City..... State.....

All classified advertisements payable in advance of publication. Rates: $5.00 up to sixty words; enclosed in border, $10.00 per inch.

Classified Advertisements

Publisher reserves the right to accept, reject or censor a classified copy.

FOR SALE

107—New 250 gallon Horizontal Aluminum Storage Tanks, oval shape, 18″ manhole, all welded construction, 64 1/4″ long, 1/8″ Aluminum Plate.

CONSOLIDATED PRODUCTS CO., INC.
16-20 Park Row New York 7, N. Y.

To Manufacturers of Packaging and Labelling Machinery, Office Equipment, & Packaging Equipment of Every Description. Sole representation and distribution rights sought for Union of South Africa and North African Colonies by highly reputable old established South African Firm (head office Capetown—sales offices throughout Union and North African Colonies), with most powerful existing established connection of 25 years standing with all the leading largest manufacturers and commercial houses in above territories. Personal contact can be made with Principal of above firm in New York during July 1946—write for appointment to "Max," c/o J. A. Ewing & McDonald Co., Greeley Square Building, 101 West 31st St., New York City, N. Y. Examples of Agencies Desired: Packaging Machinery; Labelling Machinery; Sealing Machinery; Cellowrapping Machinery; Carton closing Machinery; Typewriters; Calculating Machines; Filing cabinets; Safes and all sundry office equipment. Glass Bottles, Transparent Plastic Containers of all shapes and sizes; Plastic Packages of every Description; Advertising Novelties; "Stock" labels, calenders and blotters; Adhesives; Transparent Scotch Tapes; Transparent Food Wrappings of all Descriptions; Aluminum foil; Christmas Cards; Playing Cards; Etc., Etc.

THOMAS C. KELLY PACKAGING CONSULTANT—Appraisals—Investigations—Reports. Specializing in Packages for Chemicals, Cosmetics, Drugs, Foods, Feeds, Paints, Petroleum Products, Pharmaceuticals, Plastics, Soya Products. 135 South LaSalle Street—Suite 2001—Chicago. Telephone: Dearborn 4875

CAPS, METAL, 15 mm—425, Tin Plate, Brown and Black, with liners, gold lacquered inside. Black phenolic vials, 15 mm, 5/8″ x 15/16″. Black phenolic vials, 3/4″ x 2 1/2″ with knurled 20 mm plastic cap. Large quantities available. EMPIRE, 10-34 44th Drive, Long Island City, N. Y.

ARTIST—Free Lance—Specialist in Package Designing, creative color sketches to black and whites. M. Gerstman, 1451 Broadway, New York City—CH 3-3470.

POWDER FILLING MACHINERY: Fully automatic filling and sealing machine to fill and seal cartons 6 x 2 x 8 1/2 with free flowing powder. For immediate delivery. Box 430, Modern Packaging.

WANTED: Slitting and Rewinding Machine suitable for slitting of Cellophane and Pliofilm to minimum of 1/4″ strip. Immediate delivery, or no later than September. Box 431, Modern Packaging.

PACKAGING PLANT, extensive modern machinery, will custom pack your product for NW territory. Trackage, receiving, shipping, billing, 3 carload refrigerators. 24 inch assembly or sorting conveyor. Cello wrapping. Cello bagging. Labelling. Continuous monorail basket cooking in syrup or oils. Vegetable wash and tray pack or bag. Confections or nuts cook and package. Complete service. Cayol Foods, 626—3rd Ave. No., Minneapolis, Minn.

WANTED: Plastics Scrap, Rejects, surplus Plastics Materials. We are constant buyers of all Thermoplastics—Cellulose Acetate, Butyrate, Vinylite, etc. A. Bamberger, 44 Hewes Street, Brooklyn 11, N. Y.

WANTED

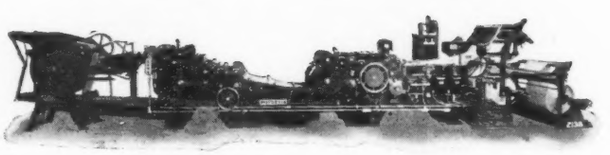
Bag machine designer for large paper converting plant in Savannah, Ga. Should have at least four years experience in designing small automatic equipment, ability to perform individual design assignments, and a well-proportioned sense of cost and practicability of design. Prefer man between 30 and 45 years of age. Salary commensurate with experience and ability. Please give full particulars in first letter. Write Employment Manager, Union Bag and Paper Corporation, Box 570, Savannah, Ga.

WANTED—Rotogravure Printing Presses—Web or Sheet Fed—Copper Cylinders, Cellophane Slitters—Sheeters. Allen Macey Company, 80 Boylston Street, Boston 16, Mass.

Paper Cutting and Converting Machinery—Die Cutting Presses—Printing Presses—Slitters—Sheeters—Etc., Bought and Sold. Brooklyn Printers Supply Company, 110 South 8th Street, Brooklyn 11, N. Y. Ev. 8-9725. We purchase complete plants or single units.

PACKAGE LINE of wood, glass, metal or plastic wanted on commission basis for sales in metropolitan New York area and/or nation-wide by aggressive sales organization specializing in sales to the confectionery manufacturing, packaging and jobbing trades. We maintain Fifth Avenue New York showrooms and sales offices in key cities. We have an enviable reputation and are well recommended. Box 432, Modern Packaging.

POTDEVIN



SPECIALTY

BAG MACHINERY

for

FLOUR, SUGAR, DOG FOOD
BAGS & SIMILAR SHELF PACKAGE
DISPLAY GOODS

Also Aniline and Oil-Ink Web Printing Presses for Pre-printing the Bag Paper.

POTDEVIN

POTDEVIN MACHINE CO.
1244:38th Street Brooklyn 18, N. Y.
Established 1893 Tel. Windsor 6-1700

Thilco Glassines and Greaseproofs Protect Safer, Better, Longer.

We're not new in Functional Papers

1908

when milady donned a "walking dress"

Thilmany *pioneered Glassine and Greaseproof papers . . .*

OUR leadership has been long and consistant in many fields of paper manufacture. In 1895 Thilmany installed the *first* "Yankee" machine in the country for the making of m. g. krafts and tissues. Two years later, we were again *first* with machine marked papers — an important identification process in wide use today; and, in 1908 we *began* paper embossing in standard and special designs.

Again, in 1908, Thilmany *pioneered* the manufacture of Glassines and Greaseproofs, revolutionizing overnight the packaging of an endless variety of foodstuffs where resistance to grease and moisture was imperative. Since then, these papers have found innumerable uses in the packaging of machine parts, corrosive metals and other products as well.

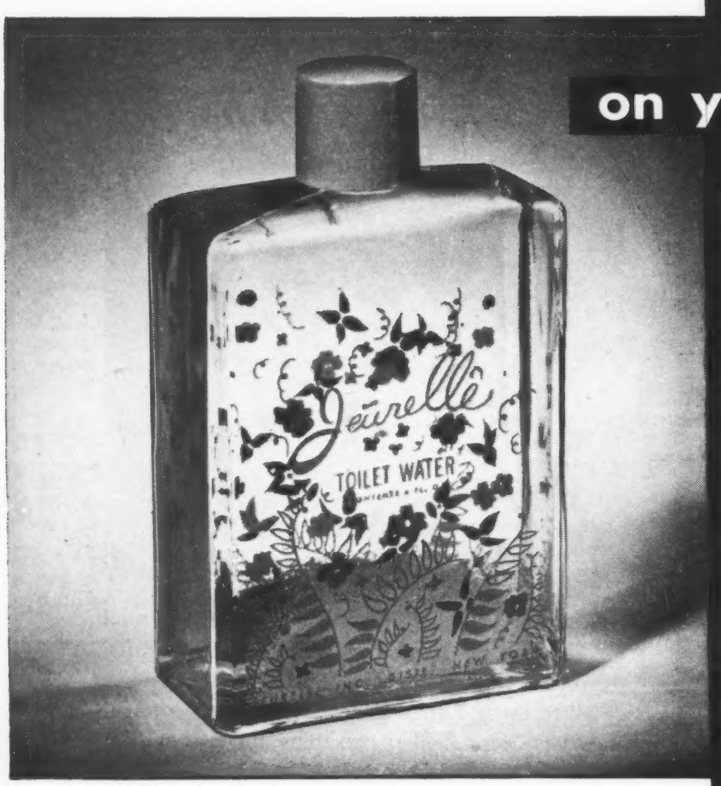
All of these Thilco papers are highly *functional* and adaptable in modern packaging, for most of them can be Printed or Embossed, Waxed or Wax-Laminated, Asphalt Laminated in heavier grades, or converted into Bags — all within our own mill.

THE THILMANY PAPER COMPANY WAS FOUNDED 1883

THILCO *Functional* PAPERS

THILMANY
PULP & PAPER COMPANY
KAUKAUNA · WISCONSIN

Creative DECORATION



on your package

Emphasizes transparency

Lends distinction

Helps sell the product

Specialists in printing and decorating glass and plastics packages. We are equipped to handle your decorating in any quantity.

Creative

PRINTMAKERS, INC.

200 VARICK STREET, NEW YORK 14, N. Y. • WALKER 5-6300

SURFACE DECORATORS FOR THE PACKAGING FIELD

IN CANADA: 2424 YONGE STREET, TORONTO, ONTARIO

INDEX TO ADVERTISEMENTS

ABC Packaging Machine Co. 188
Aluminum Co. of America 19, 27
American Anode, Inc. 64
American Can Co. 66
American Coating Mills, Inc. 81
American Cyanamid Co. 153
American Paper Goods Co. 179
Anchor Hocking Glass Corp. 23, 61
Anigraphic Process, Inc. 180
Animal Trap Co. of America 62
Arabol Mfg. Co., The 78
Armstrong Cork Co. 175
Arvey Corp. 35
Atlantic Gummed Paper Corp. 187
Avery Adhesives 184

Bagpak, Inc. 25
Ball Brothers Co. ..... Inside Back Cover
Beck Machine Co., Charles 191
Bemis Bro. Bag Co. 87
Betner Co., Benj. C. 183
Bingham Bros. Co. 188
Blue River Plastic Mfg. Corp. 186
Brooks & Porter, Inc. 52
Bulkley, Dunton & Co., Inc. 21
Burt Co., Inc., F. N. 135

Cameo Die & Label Co. 30
Carr-Lowrey Glass Co. 24
Celanese Plastics Corp. 75
Celluplastic Corp. 80
Central Ohio Paper Co., The 84
Chanin Building 178
Chicago Show Printing Co. 149
Chisholm-Ryder Co., of Pa. 166
Cleaveland Laboratories & Mfg. Co., Inc. 180
Cofax Corp., The 29
Coloroid Corp. 170
Consolidated Pkg. Machinery Corp. 187
Container Equipment Corp. 82
Continental Can Co., Inc. 34
Crawford Co., John W. 37–38
Creative Printmakers, Inc. 196
Crown Can Co. 147
Crown Cork & Seal Co. 40
Cushman & Denison Mfg. Co. 190

Davison Chemical Corp., The 155
Dennison Mfg. Co. 172
Dewey & Almy Chemical Co. 16
Diamond Straw & Machine Co. 184
Dobeckmun Co., The 45
DuPont Cel-O-Seal 173
Durez Plastics & Chemicals, Inc. 43

Eastman Kodak Co. 145
Ermold Co., Edward 192

Ferguson Co., J. L. 53
Fitchburg Paper Co. 36
Forbes Lithograph Co. 54–55

Gair Co., Inc., Robert 68
Gardner-Richardson Co., The 14–15
Gaylord Container Corp. 181
General Felt Products 85
General Printing Co. 69
Gibson Jones Co. Inc. 191
Goodrich Chemical Co., The B. F. 7
Goodyear Tire & Rubber Co. 11

Hampden Glazed Paper & Card Co. 165
Hazel-Atlas Glass Co. 9
Heat Seal-It Co. 168
Heekin Can Co., The 10
Hess & Barker 182
Holyoke Coated & Printed Paper Co., Inc. 159
Hudson-Sharp Machine Co. 180
Hummel-Ross Fibre Corp. 60

Industrial Tape Corp. 189
Inland Container Corp. 161
International Paper Co. 25
International Plastic Corp. 32
International Printing Ink 59

Jones & Co., Inc., R. A. 51

Keller-Dorian Corp. 177
Kimble Glass Co. 73
Kono-Mead Equipment Co. 26

Lachman Novasel Paper Co. 182
Lowe Paper Co. 6
Lusteroid Container Co., Inc. 164
Lynch Pkg. Machinery Corp. 47

Mack Molding Co. 28
Marathon Corp. 167
Mason Box Co., The 33
Matthias Paper Corp. 18
Miami Industries, Inc. 186
Milprint, Inc. 8
Monsanto Chemical Co. 56, 198
Mystik Adhesive Products 149

Nashua Gummed & Coated Paper Co. 88
National Adhesives ..... Inside Front Cover
National Ass'n. of Contract Packagers 193
National Paper Box Mfrs. Ass'n. 5
National Transparent Plastics Co. 163
New Jersey Machine Corp. 65

Ohio Boxboard Co. 86
Old Dominion Box Co., Inc. 22
Oliver Machinery Co. 184
Owens-Illinois Glass Co. 79, 169
Oxford Paper Co. 57

Package Machinery Co. 136
Pack-Rite Machines 193
Paisley Products, Inc. 157
Palm Bros. Decalcomania Co., The 12
Peter Partition Corp. 187
Peters Machinery Co. 162
Phoenix Metal Cap Co. 3
Plastic & Die Cast Prod. Corp. 188
Pilliod Cabinet Co., The 77
Pneumatic Scale Corp., Ltd. 151
Potdevin Machine Co. 194
Protective Coatings Corp. 50

R. C. Can Co. 39
Rhinelander Paper Co. 83
Riegel Paper Corp. 76
Ritchie & Co., W. C. 41
Rock Manufacturing Co. 191
Rowe Packaging Co., Ltd. 67

Sale Lithograph Co., The 186
Scandia Mfg. Co. 42
Sefton Fibre Can Co. 44
Shaw Randall Co. 17
Shellmar Products Co. ..... Back Cover
Simplex Paper Box Co. 71–72
Socony-Vacuum Oil Co., Inc. 185
Standard-Knapp Corp. 70
Stensgaard & Associates, Inc., W. L. 191
Stevens-Wiley Mfg. Co., Inc. 174
Stokes & Smith Co. 190
Sun Chemical Corp. 69
Sun Tube Corp. 74
Sylvania Industrial Corp. 46

Thilmany Pulp & Paper Co., The 195
Traver Corp. 31
Twitchell, Inc., E. W. 182

Unicrafts, Inc. 63
Union Paste Co. 20
United Paperboard Co., Inc. 13
U. S. Automatic Box Machinery Co., Inc. 48
U. S. Envelope Co. 58

Watson-Standard Co., The 176
Weinman Bros. 190
Western Products, Inc. 49
Wirz, Inc., A. H. 171
Wrapade Machine Co., Inc. 193

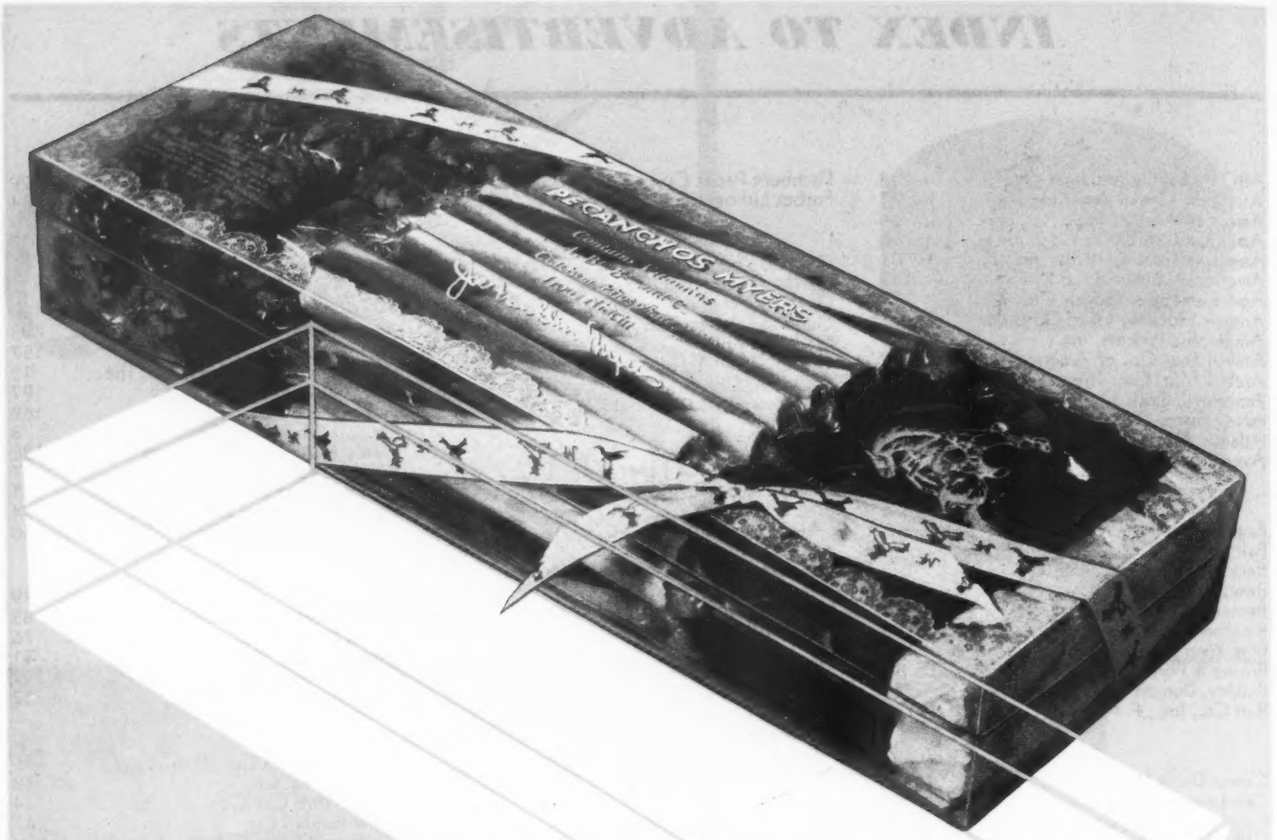
Zophar Mills, Inc. 192

A BRESKIN PUBLICATION

MODERN PACKAGING

Published by Modern Packaging Corp.

122 East 42nd Street New York 17, N. Y.



if it's de luxe it's doubly important

VUEPAK

If yours is a de luxe candy . . . or any unusual or especially tempting product . . . don't hide or jeopardize its appeals in a "blind" or inappropriate package!

Today, growing numbers of manufacturers display the freshness, quality and eye-appeal of their best lines in individual "showcases" of Vuepak . . . the sparkling, *transparent* packaging material. At the same time, Vuepak, because it's *rigid*, gives perfect physical protection to the precious contents. And it's tough and grease-proof, too.

Remember, Vuepak makes a premium package for premium merchandise; it gets and holds premium prices. Yet Vuepak's cost is right in line, especially with the new fast fabricating techniques.

Get all the Vuepak facts today from your box supplier, or write direct: MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield 2, Massachusetts. In Canada, Monsanto Canada, Ltd., Montreal, Toronto, Vancouver.

Fabricated by Central States Paper & Bag Co., St. Louis, Mo.

QUESTIONS AND ANSWERS ON VUEPAK

1. What is Vuepak?
Vuepak is a transparent, tough, rigid, beautiful Monsanto cellulose acetate.

2. In what form is Vuepak available?
In sheets up to 30" wide, and in continuous rolls 30" wide up to 1000 ft. long, in thicknesses up to .015". Available in .020" thickness in rolls with unit finish or in 20" x 50" press polished sheets.

3. In what thicknesses is it ordinarily available?
In six standard gauges 0.005" to 0.020".

4. Does sunlight affect it?
No.

5. Is it affected by heat?
Not under ordinary temperatures. It begins to soften after 200° F. Underwriters' Laboratories classification, "slow burning."

6. How can it be fabricated?
It can be drawn, shaped, formed or folded into almost any shape with inexpensive dies. It can be embossed, stapled, printed, cemented, or combined with other materials.

VUEPAK: Reg. U. S. Pat. Off.

MONSANTO PLASTICS
SERVING INDUSTRY. WHICH SERVES MANKIND

VUEPAK
TRANSPARENT PACKAGING MATERIAL
TRADE MARK

DISPLAY and SELLING

go arm in arm!

Display and selling have been team mates since earliest times when man exchanged primitive goods by barter. No matter how powerful a selling force product prestige may be today, the buyer still likes to see what he purchases. How simple and effective it is to show him your product packaged in clean, transparent, durable glass containers, bridging the gap between the shelf and the customer's hand.

The ARIDOR Co.
3428-40 WEST 48TH PLACE - CHICAGO 32
A Division of Ball Brothers Company

Use lithographed caps of striking design created by ARIDOR to speed the selection of your package.

Ball

BALL BROTHERS COMPANY

General Offices — MUNCIE, INDIANA, U.S.A.

Dill Pickles in a BAG?

CERTAINLY! Because the bag is made of *Liquid Film, an exclusive Shellmar development, now back from the war. One pickle, or two, completely sealed and in their tangy, zesty brine, meet with favor from dealer and consumer alike. A unique package — typical of the engineering resourcefulness and packaging know-how you'll always find at Shellmar.

If yours is an unusual packaging problem . . . and you want the right answer QUICK . . . call Shellmar.

SHELLMAR
PRODUCTS CORPORATION
MOUNT VERNON, OHIO • SOUTHGATE, CAL.
Sales Offices in New York, Chicago, Los Angeles and other principal cities

*Trade Mark Reg. (A lamination of Pliofilm, a product of the Goodyear Tire & Rubber Co.)

PACKAGE MANUFACTURER - PRINTER - LAMINATOR - CONVERTER . . . CELLOPHANE - PLIOFILM - ACETATE - SARAN - VINYLS - FOILS - PAPERS - COATINGS